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FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 12-51 December 7, 1951

# FOREIGN MARKET NOTES--DAIRY PRODUCTS

## El Salvador Removes Import Barriers on Certain Processed Milks and Milk Products [1]

By George H. Day
Marketing Specialist

Effective November 1, the following changes in the import tariff were established by the Salvadoran Legislative Assembly by Decree No. 452, issued October 19, 1951. This Decree also empowers the Executive to control the prices of the commodities affected as well as the products made therefrom:

Tariff item 211-3-02-003: Whole or skim milk, milk formulae (leche maternizada), buttermilk (babeurre), and cream, dehydrated or powdered and without mixture of other substances, heretofore subject to a duty of US$30.00 per 100 kgs. (US$0.136 per pound) of gross weight, will henceforth enter free of duty and other import charges, including consular fees.

Tariff item 211-3-02-004: Whole or skim milk, with or without added lactic acid, and cream, dehydrated or powdered, sweetened, flavored or mixed with unspecified substances, heretofore subject to a duty of US$30.00 per 100 kgs. (US$0.136 per pound) of gross weight, will henceforth enter free of duty and other import charges, including consular fees.

Tariff item 211-3-02-005: Evaporated or condensed milk and cream, heretofore subject to a duty of US$6.00 per 100 kgs. (US$0.027 per pound) of gross weight, will henceforth enter free of duty and other aforementioned charges.

Consular fees on the above items have amounted to 6 percent of the c.i.f. value.

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[1] Preliminary report of a continuing study of foreign market outlets and competition with United States dairy products conducted under the provisions of the Research and Marketing Act. Mr. Day acknowledges the help of the staff of the American Embassy, San Salvador, El Salvador.

The principal effects of this decree will be to cut nearly in half the landed cost of nonfat dry milk at El Salvador ports of entry and to reduce the comparable cost of dry whole milk by 25 to 30 percent. Landed costs of modified dry milks, condensed and evaporated milk would also be reduced significantly.

The increasing rate of imports of these products in recent years, virtually all of which have originated in the United States, suggests that the consumption, especially of dry whole milk, nonfat dry milk solids, modified dry milks (infant foods) and condensed milk should increase substantially, especially if consumer prices are reduced by at least the amount of the reduction in import charges. Under the old schedule of duties, prices had been so high as to limit the use of these products, among middle and lower income groups, largely to the feeding of infants and invalids.

Recent United States exports to El Salvador of each of these items, in thousand pounds, are as follows:

| Year | Dry whole | Nonfat dry milk solids | Infant foods | Condensed | Evaporated |
|---|---|---|---|---|---|
| 1950 | 130 | 1/ 1,324 | 98 | 142 | 21 |
| 1949 | 100 | 11 | 67 | 88 | 16 |
| 1948 | 57 | 3 | 53 | 92 | 13 |

An increase in the consumption of these products is expected to improve the nutritional adequacy of El Salvador diets, which in turn should tend to encourage rather than discourage the production and use of national milk. Prices of such products as are being produced in El Salvador are generally below comparable prices in the United States.

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1/ Includes large quantities shipped by the United Nations International Childrens' Emergency Fund for free distribution through maternal and child health programs,

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FD 11-51 November 7, 1951

# FOREIGN MARKET NOTES - DAIRY PRODUCTS

## Ecuador: An Active, but Crowded Market for Imported Dairy Products, Reported October 1, 1951 1/

By George H. Day
Marketing Specialist

For the last 18 months, Ecuador's economy has been favored by high prices for its exports of cocoa beans, coffee, rice, and bananas. Ecuador's reserves of foreign exchange are high and the outlook is considered generally favorable. Dry whole milk, modified dried milks and nonfat dry milk are being imported in large quantities. While these imports originate mainly in the United States, increasingly important quantities are coming from the Netherlands and Denmark, due to price advantages of up to 10 cents per pound on bulk dry whole milk and a cent or more on nonfat dry milk solids. The market is crowded with a variety of brands, competition is keen and the introduction of new products at this time is difficult.

It should be stressed that, effective March 8, 1951, virtually every kind of processed milk was placed under import category A. This means that licensed imports of dried whole milk, modified dried milks, condensed and evaporated milk or cream, malted milk and other infant's and dietetic foods, with or without milk (Tariff No. 9 (b) and 9 (c)), are granted exchange at S. 15.15 per U. S. dollar, regardless of the size of the container. While these commodities are imported free of duty, they are subject to a consular fee of 7 percent of the f.a.s. value (3.5 percent if shipment is made in any vessel of Ecuadoran registry, regardless of nationality of ownership 2/), plus a long list of Ecuadoran Government charges which are paid by the importer.

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1/ This is a preliminary report of a study of foreign market outlets and competition with United States dairy products, conducted under the provisions of the Research and Marketing Act. Mr. Day acknowledges the help of the staff of the American Embassy, Quito, Ecuador.

2/ This includes vessels of the Great Colombian Merchant Fleet (which is jointly owned by the Governments of Ecuador, Colombia and Venezuela) and a few small lines which fly the Ecuadoran flag.

The distribution of nonfat dry milk by the United Nations (UNICEF) to children, pregnant women and nursing mothers in ten Provinces in the last two years has done much to stimulate interest in both domestic and imported dairy products. While increased interest in dairying has been evident around the rapidly growing market of Guayaquil and other coastal cities, the western lowlands will continue to be a milk deficit area for the next few years, at least. This area contains about 1¼ million people, about 380,000 of which live in cities of 7,000 or more. While some imported milks are shipped to the inter-mountain basins of the Andes to the east, these valleys are largely self-sufficient and it seems unlikely that this country of 3,200,000 population has more than 250,000 people who constitute a market for whole milk products. This is due in part to the relatively low income level of the bulk of the population and in part to the increasing importance of milk production in the temperate and fertile inter-mountain basins lying between two ranges of the Andes.

Of the inter-mountain basins, which number about 10, at altitudes of around 8,000 to 10,000 feet, 6 are important in milk production. Two of these are now important in the surplus production of good quality cheeses (including Parmesan, Cheddar and Edam types) and butter. These products, besides being marketed in the Sierra, are shipped to Guayaquil and coastal cities in quantities largely adequate for the needs of those areas. Large quantities of a soft, semi-skim milk cheese, used largely in cooking, and bulk butter are marketed mostly in the cities and villages of the Sierra. Roller drying equipment has been installed in 3 separate plants in as many valleys but only one plant is now in operation, due in part to a temporary shortage of milk and in part to the age and condition of some of the equipment. Nonfat dry milk from the one plant is being used in a Quito bakery.

With climate, rainfall and soil favorable to year-round pastures in several of these valleys, prospects point to a significant increase in milk production for several years. Herd improvements, including the importation and use of pure-bred Holsteins, improved pastures and pasture management and better herd management, all are expected to result in a significant increase in milk production in the Sierra during the next few years.

Any increase in the hot and humid coastal area is apt to be slower, although there are some sections in the Provinces of Guayas, northern Manabi, and Esmeraldas that are reported to be suitable for commercial milk production. Difficulties include problems of developing dairy cattle types capable of good production under tropical conditions, of developing suitable pastures and obtaining supplementary feeds, and of establishing good standards of herd management.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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# WORLD PRODUCTION OF DAIRY PRODUCTS, THIRD QUARTER, 1951

Over-all factory output of dairy products in many of the major producing countries of the world declined slightly in the third quarter of 1951 compared with the same quarter a year ago, according to information available to the Office of Foreign Agricultural Relations. Milk production in several countries dropped below 1950 levels, due to adverse weather, reduced cow numbers and lower production per cow. Continued demands for milk for fluid consumption further reduced the milk supply and resulted in smaller quantities being available for manufacturing purposes.

Butter production in factories in the third quarter of 1951 was about 6 percent below that of comparable 1950. Increased output was reported in New Zealand in this period, attributed not only to favorable conditions late in the quarter, but also to the shift of some manufacturers from cheese-making to butter-making. In Australia, where more manufacturing milk was channeled to cheese and condensery products in this quarter, butter output declined sharply below that of a year ago, and was the lowest for any July-September quarter since 1946.

Production of butter in Switzerland showed a marked increase, weather and feed conditions being extremely favorable in the third quarter. In Sweden, however, output about equalled that of the third quarter, 1950. In other European countries for which information is available, namely the Netherlands, Denmark, Ireland and the United Kingdom where adverse weather curtailed milk production, butter output was lower than that for the same quarter of the earlier year. In Canada, excellent pastures and plentiful feeds increased milk production, and butter output was up 2 percent over the July-September period of 1950. Lower farm output of milk and somewhat higher fluid milk consumption in the United States reduced supplies of manufacturing milk and resulted in a sharp drop in butter production in the third quarter of the current year.

Cheese production in the July-September quarter approached that for the corresponding period of 1950, notwithstanding lower output in New Zealand, Canada, the Netherlands and Switzerland. Production in Australia was about the same as that of a year ago, but in Sweden, cheese output increased 19 percent and was about equal to domestic requirements. In Denmark, cheese production also was higher in the third quarter, and output in the United States was maintained close to the level of the earlier year.

Canned milk output in the quarter under review declined about 5 percent from the same 3-month period a year ago. Returns from Australia, the Netherlands and the United Kingdom indicated output at somewhat below the 1950 level. Canada was the only country reporting higher production in this quarter, attributed largely to the increased output of evaporated whole milk. In the United States, declines in production of all types of canned milk contributed to an over-all drop of 5 percent below the same quarter last year.

Dried milk production in the third quarter was approximately the same as that for the corresponding quarter of 1950. Output increased substantially in Australia, the Netherlands and Canada, but was offset by declines in Sweden, the United Kingdom and the United States.

Prospects for milk production in Southern Hemisphere countries are varied. In Australia, seasonal conditions are generally favorable except in Queensland and some districts of New South Wales, where substantial rains are needed before the normal increase in production can be expected. Pastures in New Zealand have begun to show some improvement. In almost all dairying areas, rainfall has been well above average and temperatures normal. In Argentina, milk production is still seriously impaired by drought, as the recent light rains have not reached the major dairy districts.

In Western European countries as well as the United Kingdom, there is a tendency to improve the quality of milk and of dairy products. Consumption does not keep pace with production.

In Canada, milk production for the entire calendar year 1951 is expected to continue the downward trend of recent years. However, a slight increase is expected to occur in 1952 as there are indications that numbers are increasing slightly, there is an abundance of feed in the country, production per cow remains high, and prices are encouraging. Milk production in the United States for 1951 probably will be just under 120 billion pounds compared with 120.6 billion pounds in 1950. Continued large consumer incomes will keep fluid milk consumption at a high level for the remainder of the year.--By Regina M. Murray, based in part upon U.S. Foreign Service reports.

DAIRY PRODUCTS: Output in principal producing and exporting countries, 3rd quarter (calendar) 1951, with comparisons

| Country and product | Average 1934-38 | Total 1950 | 1950 3rd quarter | 1950 4th quarter | 1951 1st quarter | 1951 2nd quarter | 1951 3rd quarter | Third Quarter 1951/1950 |
|---|---|---|---|---|---|---|---|---|
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| Butter | | | | | | | | |
| Canada | 248,119 | 261,606 | 98,139 | 44,388 | 25,290 1/ | 85,382 | 99,882 | 102 |
| United States | 1,673,328 1/ | 1,399,205 1/ | 375,240 | 246,840 | 261,645 1/ | 382,900 | 351,625 | 94 |
| Belgium | 46,179 2/ | 73,473 | 22,066 | 16,700 | - | - | - | - |
| Denmark | 400,660 | 395,946 | 111,774 | 87,963 | 81,129 1/ | 112,655 | 101,191 | 90 |
| France 3/4/ | 444,888 | - | - | - | - | - | - | - |
| Germany, Western 5/ | 360,000 | 570,710 | 168,198 | 131,785 1/ | 116,570 1/ | 171,611 | - | - |
| Ireland | 89,400 | 82,672 | 36,155 | 13,448 | 3,326 | 22,444 6/ | 32,069 | 89 |
| Netherlands | 201,000 | 205,497 | 61,105 | 38,150 1/ | 32,041 1/ | 61,978 6/ | 56,189 | 92 |
| Norway | 24,930 | 25,472 | 7,701 | 3,293 | 4,630 | 9,279 | - | - |
| Sweden | 151,309 1/ | 244,711 1/ | 71,650 1/ | 50,082 1/ | 49,901 1/ | 67,902 | 70,988 | 99 |
| Switzerland 3/ | 57,760 1/ | 41,446 1/ | 14,761 | 9,388 | 9,034 1/ | 12,308 | 17,295 | 117 |
| United Kingdom | 44,200 | 36,601 | 7,392 | 2,284 1/ | 3,405 1/ | 4,973 6/ | 3,059 | 41 |
| Argentina | 65,742 6/ | 100,000 6/ | 21,860 6/ | 42,733 6/ | 26,235 6/ | 24,251 | - | - |
| Union of South Africa | 27,725 1/ | 59,711 | 12,180 1/ | 16,089 | 21,974 1/ | 14,688 | - | - |
| Australia 7/ | 437,032 1/ | 378,888 | 72,202 | 138,595 | 99,964 1/ | 47,461 | 62,032 | 86 |
| New Zealand - total 8/ | 366,049 1/ | 372,410 1/ | 71,232 | 165,879 | 124,481 1/ | 38,248 | 73,472 | 103 |
| Export gradings 9/ | 314,753 | 309,682 | 55,825 | 138,184 | 119,439 | 30,618 | 54,089 | 97 |
| Cheese | | | | | | | | |
| Canada | 114,699 | 96,306 | 41,772 | 15,242 1/ | 4,789 1/ | 26,589 | 38,326 | 92 |
| United States | 643,234 1/ | 1,172,735 1/ | 322,500 | 214,990 | 230,885 1/ | 373,305 | 324,515 | 101 |
| Denmark | 68,820 | 129,630 | 37,258 | 29,761 | 34,833 1/ | 52,469 | 46,516 | 125 |
| France 3/4/ | 363,098 | - | - | - | - | - | - | - |
| Italy 10/ | 523,518 3/ | 575,000 | - | - | - | - | - | - |
| Netherlands | 200,000 1/ | 235,511 | 80,263 | 45,488 1/ | 40,874 1/ | 87,494 6/ | 75,571 | 94 |
| Norway | 39,067 | 56,175 | 14,243 | 8,982 | 13,354 | 21,895 | - | - |
| Sweden | 71,269 | 113,537 1/ | 28,660 1/ | 21,016 1/ | 29,421 | 35,935 | 34,171 | 119 |
| Switzerland | 111,729 1/ | 114,413 1/ | 41,497 | 22,059 | 12,926 | 31,089 | 39,220 | 94 |
| United Kingdom 3/ | 109,000 | 123,873 | 35,930 | 12,768 | 24,461 | 34,496 6/ | 33,093 | 92 |
| Argentina | 67,873 6/ | 213,000 6/ | 47,518 6/ | 75,618 6/ | 59,083 6/ | 52,910 | - | - |
| Union of South Africa | 10,195 | 20,567 1/ | 5,010 1/ | 6,218 1/ | 6,883 1/ | 4,345 | - | - |
| Australia 7/ | 49,111 | 103,687 | 21,937 | 45,770 | 22,149 1/ | 9,905 | 22,012 | 100 |
| New Zealand - total 8/ | 201,272 1/ | 238,922 1/ | 36,967 | 103,172 | 76,821 1/ | 26,356 | 32,704 | 88 |
| Export gradings 9/ | 194,175 | 224,395 | 21,320 | 93,054 | 81,570 1/ | 38,221 | 17,881 | 84 |

DAIRY PRODUCTS: Output in principal producing and exporting countries, 3rd quarter (calendar) 1951, with comparisons

| Country and product | Average 1934-38 | Total 1950 | 1950 3rd quarter | 1950 4th quarter | 1951 1st quarter | 1951 2nd quarter | 1951 3rd quarter | Third Quarter 1951/50 |
|---|---|---|---|---|---|---|---|---|
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| Canned milk | | | | | | | | |
| Canada 11/ | 92,377 | 288,174 1/ | 102,048 | 49,634 1/ | 44,059 1/ | 120,369 | 110,212 | 108 |
| United States 11/ | 2,469,535 1/ | 4,001,515 1/ | 1,144,850 | 738,145 1/ | 857,230 | 1,396,225 | 1,084,025 | 95 |
| Cuba 4/ | 32,564 | 49,728 | 20,286 | 12,390 | - | - | - | - |
| Denmark | 40,785 | - | - | - | - | - | - | - |
| France 12/ | 28,953 | - | - | - | - | - | - | - |
| Netherlands | 304,896 | 379,506 | 115,585 | 85,847 1/ | 87,726 1/ | 116,341 6/ | 98,181 | 85 |
| Switzerland | 14,198 | - | - | - | - | - | - | - |
| United Kingdom | 378,560 1/ | 297,741 1/ | 37,364 1/ | 18,995 1/ | 25,088 1/ | 96,589 6/ | 35,080 | 94 |
| Argentina | - 6/ | 17,000 | - | - | - | - | - | - |
| Australia 7/ | 41,894 1/ | 144,638 1/ | 29,555 | 55,309 | 35,279 1/ | 20,418 6/ | 29,249 | 99 |
| New Zealand 4/ | 11,273 | - | - | - | - | - | - | - |
| Dried milk 13/ | | | | | | | | |
| Canada | 23,488 1/ | 68,536 | 21,685 | 11,773 | 7,858 1/ | 22,717 | 25,059 | 116 |
| United States 4/ | 203,555 1/ | 844,180 1/ | 227,085 | 136,900 | 175,645 | 314,180 | 220,950 | 97 |
| Belgium | 5,500 | 9,397 | 2,971 | 1,074 | 1,764 | - | - | - |
| Denmark | 2,205 | - | - | - | - | - | - | - |
| France 12/ | 7,685 | - | - | - | - | - | - | - |
| Netherlands | 56,438 | 91,134 | 23,620 | 5,655 1/ | 7,379 1/ | 30,806 6/ | 26,925 | 114 |
| Sweden | 1,351 1/ | 19,841 1/ | 6,393 1/ | 4,252 1/ | 5,691 | 4,850 | 4,850 | 76 |
| Switzerland | 2,381 | - | - | - | - | - | - | - |
| United Kingdom | 33,600 | 83,507 | 15,680 | 5,914 1/ | 7,706 1/ | 27,238 6/ | 12,015 | 77 |
| Argentina | 14/ 6/ | 12,000 | - | - | - | - | - | - |
| Australia 7/ | 16,971 1/ 15/ 16/ | 92,342 1/ 15/ | 17,403 15/ | 35,337 15/ | 19,344 1/ 15/ | 11,525 6/ | 22,939 | 132 |
| New Zealand 17/ | 17,429 | - | - | - | - | - | - | - |

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1/ Revised. 2/ Total production is estimated at 165,345,000 pounds in 1950. 3/ Total production. 4/ Less than a 5-year average. 5/ Average for years 1935-38. 6/ Estimated. 7/ Production year beginning July 1. 8/ Production year beginning April 1. 9/ Marketing year beginning August 1. 10/ Total cheese, and includes cheese made from the milk of sheep and goats. 11/ Both bulk and case goods. 12/ For 1937 only. 13/ Total dried-whole and dried-skim milk for human consumption. 14/ Quantity small. 15/ Includes infants' food, health beverages, etc. 16/ Production of dried-whole and dried-skim milk was 62,631,000 pounds in 1950. 17/ For 1938.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service reports, and other information.-December 17, 1951.

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UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD-10-51 October 29, 1951

# INDICATED 1951 WORLD MILK PRODUCTION

Over-all world milk production in 1951 is showing a slight increase compared with 1950 even though production is down in some countries, according to information available to the Office of Foreign Agricultural Relations. Milk output for the year in major producing countries is indicated at approximately 9 percent above prewar.

Increases in milk production are expected in many countries in 1951 and are attributed to increased cow numbers and to higher yield per cow resulting from better and more plentiful feed, especially forage. The over-all milk output in Western European countries in 1951 probably will be about one percent greater than that of 1950 and about 5 percent over prewar. In France, milk production for the first six months of 1951 was reported to be from 5 to 10 percent higher than during the same period of 1950 as a result of an increase in the number of cows and higher yield per cow. Output for the year as a whole is indicated at about 5 percent over 1950 and about 9 percent above prewar. Milk production in Western Germany is estimated at 11 percent higher than last year, due to increased numbers and better feeding practices which increased yields. Output in 1951 also is expected to show a substantial gain over prewar. Similar conditions prevailed in Austria in 1951 and although production has not yet reached the prewar level, it is up about 7 percent compared with a year ago.

In Switzerland, a slight increase in cattle numbers and an abundance of feed have increased milk production well above 1950 and to levels of burdensome surplus. Output in both Belgium and Norway is indicated as above that for a year ago and considerably above prewar. Conditions for milk production, especially pastures, in Italy in 1951 were better generally than in 1950 and a substantial rise in output over both 1950 and the prewar period is anticipated.

Slightly lower milk production in Denmark is expected in 1951 compared with 1950, due to some fodder shortages and a late spring, although it will probably be slightly above prewar. In Sweden, rate of production continued high, but was not sufficient to offset the decline in cow numbers and milk output will be lower than in 1950. Despite some increase in cow numbers in the Netherlands, the reduced rate of grain feeding, due to higher prices, and the late grazing season will be reflected in a decline in milk output in 1951 of approximately 2 percent. However, milk production will continue to exceed that of the prewar period.

Bad weather, unfavorable prices and some reduction in herds are still hampering output in Ireland, which has not yet reached the prewar level of production. In the United Kingdom, the very bad winter and late grazing and a slight downward trend in cow numbers, due to the unfavorable milk-feed price ratio and to more emphasis being placed on the rearing of beef cattle, are expected to result in a drop of about 7 percent in milk production, although it will be well above prewar.

Milk production in Australia may decline about 4 percent, the very dry conditions in the major producing States in the first half of the year having hindered considerably the output of that period. Conditions in New Zealand were more favorable and milk production in the 1950-51 crop year is expected to show a marked gain over a year ago. Production in both countries will be higher than that of the prewar period.

In Argentina, drought conditions in the second and third quarters depleted pastures and herds and milk production for the year probably will show only a very slight increase over 1950.

Excellent pasture and a higher rate of production per cow in Canada will barely offset the decline in cow numbers, and milk production in 1951 probably will show very little change from 1950, although it will continue at a higher level than in prewar years. Despite high yield per cow in the United States, a slight drop in cow numbers will hold milk production for 1951 just below that for 1950, but still considerably above prewar.

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This is one of a series of regularly scheduled reports on world agricultural production approved by the Office of Foreign Agricultural Relations Committee on Foreign Crop and Livestock Statistics. It is based in part upon U. S. Foreign Service reports.

MILK: Preliminary estimate of 1951 production in important producing countries, with comparisons 1/

| Countries | Average 1934-38 | 1949 | 1950 | 1951 |
|---|---|---|---|---|
| | Million pounds | Million pounds | Million pounds | Million pounds |
| Canada | 2/ 15,284 | 16,843 | 16,437 | 16,500 |
| United States | 105,416 | 122,000 | 120,600 | 120,000 |
| Austria | 3/ 5,602 | 4,079 | 4,354 | 4,650 |
| Belgium | 6,790 | 6,816 | 6,944 | 7,050 |
| Czechoslovakia | 4/ 9,828 | 5,768 | 6,500 | - |
| Denmark | 5/ 11,684 | 10,789 | 11,931 | 11,900 |
| France | 33,000 | 30,671 | 34,079 | 36,000 |
| Germany, Western | 6/ 33,071 | 24,950 | 31,151 | 34,000 |
| Ireland | 5,090 | 5,068 | 5,296 | 5,003 |
| Italy | 7/ 13,750 | - | - | - |
| Netherlands | 11,180 | 11,803 | 12,617 | 12,300 |
| Norway | 5/ 2,954 | 3,417 | 3,582 | 3,600 |
| Sweden | 5/ 10,238 | 10,245 | 10,825 | 10,700 |
| Switzerland 8/ | 5,852 | 5,142 | 5,534 | 5,900 |
| United Kingdom | 18,424 | 21,552 | 23,160 | 21,500 |
| Australia 9/ | 10/ 11,730 | 12,968 | 12,966 | 12,500 |
| New Zealand 10/ | 10,176 | 10,135 | 10,416 | 11,000 |

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1/ Cows' milk. 2/ Average 1935-39. 3/ For 1934. 4/ For 1937. 5/ Average 1933-37. 6/ Average 1935-38. 7/ For 1938. 8/ Includes goats' milk. 9/ Excludes milk fed to calves. 10/ Years ending June 30.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service reports, and other information.- October 29, 1951.

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UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 9-51 October 19, 1951

FOREIGN MARKET NOTES--DAIRY PRODUCTS

# Argentina as a Source of Dairy Products in World Trade, Reported August 27, 1951 1/

By George H. Day
Marketing Specialist

## Introduction

For several years, Argentina has been important as a source of world supplies of casein, butter, and cheese, principally hard or grating cheese. The potential production of this country is generally conceded to be very great. In the last few years, however, there has been a tendency for exports, especially of butter and cheese, to decline. Exports of casein, which increased continually for 25 years, have likewise shown a tendency to decline irregularly since 1944.

This report is intended to present in brief outline some of the principal developments which have a direct bearing on the prospective exportation of dairy products from Argentina for the next 5 to 10 years. There is virutally no possibility of exporting dairy products to Argentina owing to its record of surplus production and the likelihood of a continued policy of excluding imports of such products. As the unfolding policies of the present Argentine Government will constitute a very potent but unpredictable influence upon both production and exports, any prognostication as to the direction or extent of these exports is extremely dangerous. Little more than a cursory treatment of this subject appears warranted at this time.

This statement represents a summary of interviews made with a number of those familiar with the conditions of production, processing, and marketing of dairy products in Argentina. It attempts to interpret their views and present a few tentative conclusions for consideration.

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1/ This is a preliminary report of a study of foreign market outlets and competition with United States dairy products, conducted under the provisions of the Research and Marketing Act. Mr. Day acknowledges the help of the American Embassy, Buenos Aires, and Argentine Government and trade sources.

## Production, Distribution, and Utilization of Milk in Argentina

Most of Argentina's cattle population, estimated at from 35 to 40 million head are grazed on the Pampa, a level, fertile plain which forms a great semi-circle around Buenos Aires. The milk area includes most of the Provinces of Buenos Aires, Cordoba, and Santa Fe and the southwestern part of Entre Rios. It is roughly 200 to 300 miles in radius.

About half of the milk is produced in Buenos Aires Province, where rainfall, temperatures, and pastures are favorable, where transportation to the main domestic and world markets is better, and where the greatest concentration of cattle is found. A large part of the milk comes from the beef cattle belt where cows, principally of the predominant Shorthorn stock, are milked during the period of flush milk production.

An increasingly large part, however, is now being produced on certain portions of the large cattle ranches (estancias) which have been converted into specialized dairy units using Holando-Argentino cattle, a stocky variety of the Dutch black and white cattle. Even on the dairy units, where production per cow compares favorably with that in the United States, milking is generally done once a day on the range or in open corrals, and the milk is rarely cooled before shipment to plant or city.

About a quarter of the milk is produced in the Province of Cordoba, largely from dual-purpose Shorthorns under conditions similar to, though drier than, those on Buenos Aires ranches and about one-quarter in Santa Fe, where milk production generally is a part of the diversified operations of small farms. A small but increasing amount of milk is being produced in the southwest part of Entre Rios.

Within the great semi-circle there are two concentrated fluid milksheds in which the cattle are kept predominantly for milk.

The Buenos Aires milkshed comprises a semi-circle about 200 kilometers (125 miles) in radius, 2/ varying considerably in size from season to season, where milk is produced principally on large estancias. Most cattle are grazed year round as the weather is moderate; other than cultivated pastures and some alfalfa, little or no supplementary feed is furnished.

The other concentrated milkshed is around Rosario (Santa Fe) where well-organized cooperatives with members principally of Italian, Spanish, and Swiss descent supplies milk primarily from Holando-Argentino cattle. The colonias (relatively small farms) of Santa Fe Province are more in the nature of general farms. The milk cows outside the Rosario milkshed are predominantly Shorthorns; they are given good care and are frequently fed on improved pastures, forage, and concentrates.

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2/ During the current winter drought some milk is shipped over 250 miles.

Within the milk-producing area of the four Provinces mentioned above are located a small number of relatively intensive areas where milk is produced for manufactured products. The rest of the milk is produced on scattered ranches and farms throughout the area. In the concentrated areas are located the principal plants which process cheese or a combination of butter and casein. There is also a gradually increasing number of milk condensing and drying plants.

No accurate figures are available on the number of cows being milked annually, there being a wide variation in the number of Shorthern cows cut out of any given herd for milking.

Argentina's total 1950 milk production is estimated unofficially at 4 billion liters (approximately 9.1 billion pounds). This figure is based largely on estimates of milk used in the manufacture of dairy products, for fluid milk, and for milk used on farms, and it takes into account certain trade estimates. It is estimated that 4 million cows were being retained for milk production. This includes about 3 million head of dairy breeds (mostly Holando-Argentine and crosses) and about 1 million dual-purpose cows. While other dairy stock are excluded, the estimate may include some cows not actually milked during the year. One estimate for 1950 placed the number of cows milked at 3 million head. This would indicate an average production per cow of from 2,300 to slightly over 3,000 pounds annually. Some estimates of cows milked and milk produced are slightly higher. The following breakdown gives a fair impression of the relative importance of the various products in terms of milk utilization:

| Product | Milk used in 1950 (Billion pounds) | Percent of total |
|---|---|---|
| Butter and casein ........................ | 3.4 | 37 |
| Cheese .................................. | 2.6 | 29 |
| Fluid milk (utilization) ................ | 1.8 | 20 |
| Probable farm consumption of fluid milk, cheese, and butter .................... | 1,2 | 13 |
| Other (including powdered, condensed, and evaporated milk and "Dulce de Leche" 1/) | 0.1 | 1 |
| | 9.1 | 100 |

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1/ A preparation of sugar and milk used as jam.

Butter, which has for many years represented the biggest single use for milk in the Argentine, is produced in practically every part of the Pampa. Originally, due to the lack of transportation, processing facilities, and markets, most of this was made from farm-separated cream delivered to butter plants scattered over the area. With a general dissemination of information concerning the processing of, and markets for, casein, however, there developed a great number of small, scattered cream-or butter-casein plants, and there has been a significant increase in the amount of whole milk delivered to these plants in the last 30 years 3/. At present it is estimated that about 75 percent of the butter is made from factory-separated whole milk from which the skim milk is used primarily for casein. Most of the balance is produced in a few large centralizer-type plants receiving cream from a relatively large area. Although butter production recently has been greater than in prewar years, an increase in domestic consumption has tended to reduce exports.

Exports of butter rose sharply in late 1950 and early 1951 in anticipation of a limited export quota which was established for the February 15 to April 15, 1951 period. The consequent reduction in butter stocks, combined with a serious drought in much of the dairy area has resulted in a scarcity of butter during the current winter season. The official retail price of butter at 6 pesos per kilo (slightly less than US$0.19 per pound) is largely nominal 4/.

Both production and exports of casein increased irregularly from 1920 to 1944 as a result of the increase in whole milk deliveries. Since then, production has registered little change in spite of a gradual increase in milk production due to a wartime shift of whole milk to cheese production, a gradual increase in utilization for fluid milk, and the effect of recent droughts on milk production in butter-casein producing areas. There seems little likelihood of any sharp diversion from butter-casein to other whole milk products in the near future. Because of transportation difficulties affecting milk assembly and product shipment, it seems likely that much of the milk will continue to be delivered to small plants scattered throughout most of the area in quantities too small to make the introduction of cheese-making and other facilities appear economic.

Following a number of years in which production was on a limited scale for domestic consumption, cheese production increased phenomenally during World War II, when United States and United Kingdom markets were cut off from customary sources. During this period a number of the larger butter-casein plants installed suitable vats and equipment and embarked on the production of cheese, principally hard or grating-types for export. Insufficient attention reportedly was given to maintaining quality standards, however, and Argentine cheese has not continued to hold its significant part of the export market. The recent enforcement of United States cheese quality requirements by the Food and Drug Administration has worried Argentina exporters, since some recent letters of credit provide for payment only after the shipment has cleared United States customs.

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3/ At many of these plants the milk is separated for the sale of cream to larger butter-making plants, the skim milk is used in the production of casein and the whey is fed to hogs.

4/ Computed at the free market rate of 14.50 pesos per U.S. dollar.

In cheese production, the hard or grating varieties are still the most popular, representing about half the total output. These cheeses are used in soups, in a variety of Italian dishes and other foods, and in desserts. The official price per kilo is the same as for butter, but cheese, like butter, is actually sold at somewhat higher prices. Semi-hard table cheeses, including Patagras (a Gouda type) and Mar del Plata, represent about a quarter of the total production. While the official price is nominally lower than for hard cheeses, the actual selling price under the present shortage is nearly as high. Cuartirolo, a soft, "creamy" type cheese which is very popular as a dessert, represents most of the balance of production. Although the official retail price of this cheese is 4.60 pesos per kilo (about US$0.145 per pound) or slightly less than the semi-hard types, the actual selling price is about the same as for the other types of cheese.

The rapidly expanding centers of urban population have accounted for the increasing demand of fluid milk. The metropolitan area of Buenos Aires, with a population of about 4 million people is now consuming about 1 million liters of milk per day which is equivalent to roughly one-half pint per person. The demand for fluid milk in Rosario, Santa Fe, and other large cities of the area is also increasing. Outside the major production area, most of the milk produced is used for fluid consumption in city milksheds.

In the Buenos Aires metropolitan market, three or four pasteurizing plants account for about 40 percent of the total distribution. From these plants milk is distributed through milk bars or depots or direct to homes. There is little or no distribution through grocers. The balance of the milk is distributed by small raw milk producer-distributors; much of it is measured out into consumers' own containers. In its desire to make milk generally available at low cost, the Government has established a maximum retail price of 70 centavos (about US$0.05) per liter 5/. The minimum price paid to producers is 35 centavos per liter. As a result of these low prices, the butterfat content is extremely low, and it is reported that a relatively large amount of water is added. In an effort to provide adequate milk during the current winter season, the Ministry of Industry and Commerce on June 1 restricted the manufacture of dairy products within a radius of approximately 200 kilometers (approximately 125 miles) of Buenos Aires.

The production of dry whole milk and modified dried milks in Argentina is relatively unimportant. The demand is limited as a result of the general availability of fluid milk, and relatively low ceiling prices have served as an additional deterrent to the production of these products. At present about six firms, four of which are relatively large, produce spray process dry whole milk or modified dried milks in a total of about eight plants. Two of the plants are moving, or have recently moved, from the Buenos Aires metropolitan area to more distant locations in Cordoba and Buenos Aires Provinces. The receipts of milk at these eight plants is believed to be not much more than 200,000 liters (about 450,000 pounds) daily for a period of 8 to 10 months a year. Some of this milk is also used in the processing of condensed and evaporated milk.

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5/ Computed at the free market rate of 14.50 pesos per U. S. dollar. One liter equals about 1.057 quarts.

Three firms are reported to be processing dried whole milk and a small amount of dried skim milk and modified milks in four plants on roller process equipment. Most of the production of these firms is understood to be suitable for ice cream, bakery products, and other industrial purposes. Daily average receipts of milk at these plants is believed to be about 20,000 liters (about 45,000 pounds) for a period of 6 to 8 months annually. No production of spray process nonfat dry milk has been reported.

Condensed milk is being packed in three or four of the plants, referred to above, which also dry milk. Distribution is reported to include some of the more remote sections of the country, but prices are under control, and the quantity packed is not large.

The production of evaporated milk is the least important of all canned and dried milk products. Less than 3,000 cases (48 - 14½-oz. cans) are believed to be packed annually by two firms, one of which also produces dried milk products.

## Dairy Product Exports: Possibilities of Recovery or Expansion

A constantly expanding dairy industry appears inevitable in Argentina for many years to come, notwithstanding the present hindrances to its development. Properly encouraged, possibilities of export appear very promising. The integral part which dairying can play in the gradual evolution toward a system of more general farming on the still fertile Pampa is evident from developments already taking place. Dairying can not only make it economically possible to restore soil fertility, but can play an important part in providing foods high in protein and other essential elements, as meat becomes more scarce, and can contribute an important source to farm income.

The extent of the increase in the production for export of dairy products will depend on several factors:

1. The continuation of the present policy, first effective in August 1950, of establishing a favorable exchange rate on dairy product exports 6/. This stimulus was especially favorable to butter, which had previously been priced out of the world market.

2. The tremendous carrying capacity of that portion of the Pampa which could be diverted from beef to the production of milk. Already favored by naturally fertile soils and good climate, the carrying capacity could be increased by additional pasture improvement to extend the grazing season. The increased use of hay, silage, and the already plentiful supplies of grains and other concentrates could augment production in some areas. It is significant that dairy herds are already being established on a number of the larger estancias, formerly devoted to beef.

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6/ Present exchange rate is 750 pesos to US$1.00.

3. The probable ultimate relaxation of price and milk utilization controls. If returns become adequate, the breeding of better cattle and the furnishing of better care would encourage an increase in production. A relaxation of price controls would also make possible better wages and working conditions to good quality dairy labor.

4. The growing scarcity of meat supplies resulting from a growing domestic demand, recent droughts and a decline in beef cattle numbers appears to have contributed to an increased demand for cheese and other dairy products which may result in turning greater attention to the development of dairying. This,in turn may result in an improvement in transportation and marketing facilities, the establishment of higher standards of sanitation and the establishment and enforcement of consistent quality standards necessary in building and maintaining export markets.

5. An interest in dairying on the part of large groups of Argentine people who are of European birth or descent. According to Taylor[7] 50 percent or more of the farm entrepreneurs in 139 of the 420 counties of the nation in 1937 were foreign born. Important among these groups are Italians, Spanish (including Basques), Russians, Poles,and Germans.

   Postwar (II) immigrants have been predominately Italian and Polish with small groups of Swiss, German, and Yugoslav nationalities, many of whom have become urban residents. They frequently have labor at hand which could be used in dairying. About 600 Netherlands families have migrated to the Argentine, mostly under contract with landowners, to operate the dairy units of large estancias. A national policy more favorable to dairying probably would find quick response among entrepreneurs and landowners in these groups on cattle, corn and wheat farms of the Pampa.

Important conditions are now serving to retard this expansion:

1. The present policy of rigid price controls, which attempts to make dairy products available at low consumer prices, together with other restrictions on milk utilization. These policies discourage producers from the use of better cattle, the production and processing of better products, and the development of better marketing methods.

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[7] Taylor, Carl C. : Rural Life in Argentina p.112.

2. The problem of transportation. Reportedly, conditions are getting worse. This applies to the quantity and quality of railroad rolling stock and to a reported deterioration of internal roads and highways.

3. The continuous demands of both farm and factory labor. Recent strikes and the possibility of further increases in minimum wages and of better working conditions create uncertainties which serve as a deterrent to further increases in dairying.

4. The increasing frequency of severe droughts in recent years. These may indirectly as well as directly delay any increase in dairying. The 1951 drought was severe in the heart of important dairy areas.

5. Declining crop yields and overgrazed pastures. These are in evidence in the drier areas of the Pampa.

6. The lack of quality maintenance in exported products, notably butter and cheese. This reportedly has prejudiced some of the important foreign markets against Argentine product.

7. The present system in which farms are operated by tenants for absentee landowners often under contracts which makes expansion into dairying difficult if not impossible. This has retarded the rate of improvement in dairy farm practices in some cases.

8. The constantly growing size and area of metropolitan Buenos Aires and other cities. This is not only resulting in an increased demand for dairy products for domestic consumption, but is literally crowding dairy farms farther into the interior. This implies a reduction in exports, if not in national production.

Much will depend on policies established and agreements made in the export markets on which Argentina is dependent. Favorable agreements with the United Kingdom for meat would stimulate beef cattle production and retard dairy expansion. Restrictions placed on imports of dairy products will also tend to discourage production for export. The recent United States Department of Agriculture announcements restricting or controlling imports, especially of cheese and casein, came as a shock to the Argentine dairy trade, even though it was recognized that the effect of this regulation might not be felt in the immediate future.

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UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD-8-51 September 24, 1951

## WORLD OUTPUT OF DAIRY PRODUCTS, SECOND QUARTER, 1951

Factory production of butter, cheese and dried milk was less and that of canned milk was more in the second quarter of 1951 as compared with the same quarter of 1950 in many of the important producing countries of the world. 1/

Conditions for milk production in the Northern Hemisphere were generally favorable in most countries despite the lesser availability of grain supplies and adverse spring weather in most Northwestern European countries. However, a larger than usual proportion of the seasonally high milk output was used for fluid consumption and less was available for utilization in the manufacture of dairy products. In the Southern Hemisphere, the seasonal decline in milk production was less than usual and despite some increase in fluid milk consumption, adequate milk was available for manufacture except in Australia.

Milk cow numbers in 1951 are above the 1950 levels in Denmark, Western Germany, the Netherlands, Switzerland and New Zealand and down in Canada, Ireland, Sweden and the United Kingdom and practically unchanged in the United States.

Butter production for the second quarter of 1951 as compared with the same quarter of 1950 was down 8 percent for the countries reporting. 1/ Production was up in Western Germany, Switzerland, the Union of South Africa and New Zealand; it was down in Canada, the United States, Denmark, Ireland, the Netherlands, the United Kingdom and Australia; and it was about even in Sweden and Argentina. Cheese production was down more than 4 percent in the countries reporting. 1/ Output was up in Denmark, Argentina and the Union of South Africa; it was down in Canada, the United States, the Netherlands, Switzerland, the United Kingdom and Australia; and it was about even in Sweden and New Zealand. The output of canned milk was up more than 2 percent in the countries reporting. 1/ and was up in Canada and the United States and down in the Netherlands, the United Kingdom and Australia. The production of dried milk was down in all countries reporting including Canada, the United States, the Netherlands, Sweden, the United Kingdom and Australia for a total of nearly 20 percent.

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1/ See commodity tables following for specific countries.

In Canada, milk production for the second quarter of 1951 has been below the level of 1950 due to a decrease in dairy cow numbers. There has been an increase in consumption of fluid milk and ice cream and an increase in output of canned milk. Consequently, the second quarter output of butter, cheese and dried milk in 1951 has been below the 1950 levels. Exports of dairy products during the first six months of 1951 have been substantially below those of 1950 and imports of butter have been up. Prices of all dairy products are considerably higher than in 1950 and demand remains strong.

In the United States, milk cow numbers on January 1, 1951 are practically unchanged from a year earlier. Milk output in May was slightly above and that in April and June was slightly below that of the same months of the previous year. Fluid milk consumption has continued high as has the output of canned milk. The output of butter continues its downward trend and both cheese and dry milk output were lower in the second quarter of 1951 than in the same period of 1950.

In Denmark, cattle numbers in 1951 exceed those of 1950 but milk production for the second quarter of 1951 has been lower than for 1950. This was caused by a shortage of fodder and a late pasture season due to adverse weather conditions. Due to the decrease in milk production and diversion of the available supply to other uses, the output of butter in the second quarter of 1951 was lower than in 1950. The output of cheese increased considerably due to the then good possibilities for export. Casein production for the first five months of 1951 was over 17 million pounds compared to slightly over 7 million pounds for the same period of 1950.

In Western Germany, the number of milk cows in 1951 was about 1 percent more than in 1950 and were 96 percent of prewar levels. Milk yields per cow exceeded prewar levels as did total milk production and butter output. The output of cheese, canned and dried milk are unofficially reported to have reached postwar peaks. Imports of dairy products were valued at over 10 million dollars and were largely of butter and cheese. Exports were valued at just over 1 million dollars and were mainly of dry milk and cheese.

In Ireland, dairy cattle numbers in June 1951 were estimated at nearly 5 percent less than for a year earlier. This, plus poor feeding conditions and the late spring, resulted in milk production in the second quarter of 1951 being 25 percent less than in the comparable 1950 period. Butter output was 20 percent lower than for the second quarter of 1950. The output of cheese and dried milk was up slightly and the output of condensed milk was about the same in the second quarter of 1951 as compared to the same period of 1950. Ireland is currently on an import basis for butter but maintains a small steady trade in dried and condensed milk, cheese and chocolate crumb.

In *Italy*, conditions for milk production have been most favorable in 1951 as compared to 1950. Abundant rainfall has resulted in excellent forage yields and has permitted much more than the usual grazing.

In the *Netherlands*, the number of milk cows has continued to increase in postwar years and is nearly at prewar levels but milk production for the second quarter of 1951 has been below the 1950 level because of a shortage of grain and the prevailing poor pasturage. For the second quarter of 1951 as compared with the same quarter of 1950, butter, cheese and dry milk output have been low while canned milk production was about the same.

In *Sweden*, cattle numbers in 1951 are slightly lower than in 1950 and milk production is also down. The output of butter in the second quarter of 1951 is slightly less than in 1950 as is that of dried milk, while cheese output has shown a small increase. Exports of butter during the first six months of 1951 were over 20 million pounds and it appears that no sizeable surplus will remain at the end of the year,

In *Switzerland*, it is estimated that the number of milk cows in 1951 is about 1 percent over that of 1950 but still below prewar levels. This, plus abundant feed supplies and excellent pasture conditions, increased milk production in the second quarter of 1951 about 10 percent above the same period in 1950. Butter output was up considerably and cheese output down slightly during the second quarter of 1951 as compared to the same quarter of 1950.

In the *United Kingdom*, milk cow numbers in June 1951 were about 3 percent below those of a year earlier. The total sale of milk from farms was down 9 percent as a result of the decrease in cows and of the unusually bad weather during the winter and spring and the resultant late pasture season. The milk available for manufacture in the second quarter of 1951 was less than two-thirds of that in 1950 and the output of butter, cheese, canned and dried milk was down well below 1950 levels.

In *Argentina*, the production of milk during the second quarter of 1951 dropped more than seasonally due to drought conditions. Butter output was about the same as for the second quarter of 1950. The cheese output was down about 4 percent, and casein output was up about 10 percent. Stocks of butter and cheese are low while those of casein are relatively high. Exports of butter, cheese and casein dropped off in May and June from the previous months' high levels,

In the *Union of South Africa*, the production of milk and dairy products for the second quarter of 1951 continued at record high levels, The over-all feed situation has been good with excellent green wheat grazing. Butter output has been up about 9 percent and cheese output up about 3 percent in the second quarter of 1951 as compared to the same period of a year earlier. Condensed milk output is down by 10 percent but dry milk is up by 22 percent.

In Australia, dairy cattle numbers appear to be slightly below 1950 levels and milk production for the second quarter of 1951 has been more than seasonally low. The output of butter, cheese and canned milk has been well below that for the same quarter of 1950 while dried milk has been at about the same level. Substantial rains fell during June and July and feed conditions have continued to improve into August and the upward seasonal trend in milk production is well under way.

In New Zealand, milk production during April was at a high level but it declined sharply in May and June due to heavy frosts which retarded pastures and caused it to follow the normal seasonal pattern. Production of butter in the second quarter of 1951 was up considerably as compared to the same quarter of 1950 and cheese output was about even. Export gradings of both cheese and butter increased over the same quarter a year ago. The increase in export prices for dairy products and the indicated increase in dairy cattle numbers are expected to result in higher levels of milk production in the next season.

- By Louis M. Smith, Jr. based in part upon U. S. Foreign Service reports.

DAIRY PRODUCTS: Output in principal producing and exporting countries, 2nd quarter (calendar) 1951, with comparisons

| Country and product | Average 1934-38 | Total 1950 | 1950 2nd quarter | 1950 3rd quarter | 1950 4th quarter | 1951 1st quarter | 1951 2nd quarter | Second Quarter 1951/50 |
|---|---|---|---|---|---|---|---|---|
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| Butter | | | | | | | | |
| Canada | 248,119 | 261,606 | 88,228 | 98,139 | 44,388 | 25,290 | 85,300 | 97 |
| United States | 1,673,328 1/ | 1,396,685 1/ | 452,480 | 374,755 | 246,840 | 261,645 | 382,795 | 85 |
| Belgium | 46,179 2/ | 73,473 | 21,834 | 22,066 | 16,700 | - | - | - |
| Denmark | 400,660 1/ | 395,946 | 116,622 | 111,774 1/ | 87,963 | 81,129 3/ | 113,537 | 97 |
| France 4/5/ | 444,888 | - | - | - | - | - | - | - |
| Germany 6/ | 560,000 1/ | 570,710 | 161,363 | 168,198 1/ | 131,785 | 116,204 | 171,610 | 106 |
| Ireland | 89,400 | 82,672 | 27,998 | 36,155 | 13,448 | 3,326 | 22,444 | 80 |
| Netherlands | 201,000 1/ | 205,497 | 71,092 | 61,105 1/ | 38,150 | 32,045 | 51,996 | 73 |
| Norway | 24,930 1/ | 25,472 | 9,721 1/ | 7,701 1/ | 3,293 | - | - | - |
| Sweden | 151,309 | 239,420 | 68,865 1/ | 70,324 1/ | 50,150 | 50,044 | 69,224 | 101 |
| Switzerland 4/ | 57,760 1/ | 41,501 | 11,166 | 13,806 1/ | 9,388 | 9,034 | 14,513 | 130 |
| United Kingdom | 44,200 1/ | 36,601 | 19,085 | 7,392 1/ | 2,284 | 3,226 | 5,062 | 27 |
| Argentina | 65,742 3/ | 112,360 3/ | 24,270 3/ | 21,860 3/ | 43,651 | 26,235 | 24,250 | 100 |
| Union of South Africa | 27,725 | 59,715 | 13,486 | 12,180 | 16,093 | 21,974 | 14,689 | 109 |
| Australia 7/ | 437,032 | 378,886 | 62,273 | 72,202 | 138,595 | 99,964 | 47,466 | 76 |
| New Zealand - total 8/ | 366,049 1/ | 372,361 | 27,911 | 71,082 | 165,879 | 124,481 | 45,560 | 163 |
| Export gradings 9/ | 314,753 1/ | 309,682 1/ | 18,574 | 55,825 | 138,184 | 119,439 | 30,618 | 165 |
| | | | | | | | | |
| Cheese | | | | | | | | |
| Canada | 114,699 | 96,306 | 34,111 | 41,772 | 15,242 | 4,787 | 27,000 | 79 |
| United States | 643,234 1/ | 1,170,465 1/ | 386,550 | 321,325 | 214,990 | 230,885 | 373,035 | 97 |
| Denmark | 68,820 1/ | 129,630 | 35,715 | 37,258 1/ | 29,761 | 34,833 3/ | 51,147 | 143 |
| France 4/5/ | 363,098 | - | - | - | - | - | - | - |
| Italy 10/ | 523,518 3/ | 575,000 | - | - | - | - | - | - |
| Netherlands | 200,000 | 235,510 | 77,356 | 80,263 | 45,488 | 36,458 | 64,810 | 84 |
| Norway | 39,067 1/ | 56,175 | 20,109 1/ | 14,243 1/ | 8,982 | - | - | - |
| Sweden | 71,269 | 113,537 | 35,600 | 28,614 1/ | 20,977 | 29,101 | 35,935 | 101 |
| Switzerland | 111,729 1/ | 114,106 | 35,549 | 41,190 | 22,059 | 12,926 | 31,089 | 87 |
| United Kingdom 4/ | 109,000 1/ | 123,873 | 46,637 1/ | 35,930 1/ | 12,768 | 23,110 | 34,234 | 73 |
| Argentina | 67,873 3/ | 226,018 3/ | 49,394 3/ | 47,518 3/ | 75,618 | 59,083 | 52,910 | 107 |
| Union of South Africa | 10,195 | 20,567 | 4,211 | 5,012 | 6,252 | 6,886 | 4,339 | 103 |
| Australia 7/ | 49,111 1/ | 103,687 | 12,227 | 21,937 1/ | 45,770 | 22,149 | 9,910 | 81 |
| New Zealand - total 8/ | 201,272 1/ | 239,594 | 25,715 | 36,998 | 103,172 | 76,821 | 25,825 | 100 |
| Export gradings 9/ | 194,175 | 224,395 | 32,602 | 21,320 | 93,054 | 81,570 | 38,311 | 118 |

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DAIRY PRODUCTS: Output in principal producing and exporting countries,
2nd quarter (calendar) 1951, with comparisons

| Country and product | Averages 1934-38 | Total 1950 | 1950 2nd quarter | 1950 3rd quarter | 1950 4th quarter | 1951 1st quarter | 1951 2nd quarter | Second Quarter 1951/50 |
|---|---|---|---|---|---|---|---|---|
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| Canned milk | | | | | | | | |
| Canada 11/ | 92,377 | 288,174 | 98,701 | 102,079 | 49,634 | 40,940 | 116,106 | 118 |
| United States 11/ | 2,469,535 1/ | 4,001,440 1/ | 1,303,625 1/ | 1,144,585 1/ | 738,145 | 875,230 | 1,396,225 | 107 |
| Cuba 5/ | 32,564 | 49,728 | 9,408 | 20,286 | 12,390 | - | - | - |
| Denmark | 40,785 | - | - | - | - | - | - | - |
| France 12/ | 28,953 | - | - | - | - | - | - | - |
| Netherlands | 304,896 1/ | 379,506 | 105,016 | 115,585 1/ | 85,847 | 83,281 | 103,085 | 98 |
| Swtizerland | 14,198 | - | - | - | - | - | - | - |
| United Kingdom | 378,560 1/ | 289,766 | 172,390 | 33,510 1/ | 14,874 | 33,130 | 105,750 | 61 |
| Australia 7/ | 41,894 | 143,926 | 22,377 | 29,163 | 55,309 | 35,279 3/ | 20,752 | 93 |
| New Zealand 5/ | 11,273 | - | - | - | - | - | - | - |
| Dried milk 13/ | | | | | | | | |
| Canada | 23,488 1/ | 68,210 | 23,879 | 21,685 | 11,773 | 7,858 | 23,000 | 96 |
| United States 5/ | 203,555 1/ | 975,020 1/ | 364,410 1/ | 228,120 | 136,900 | 175,645 | 314,180 | 86 |
| Belgium | 5,500 | 9,397 | 3,954 | 2,971 | 1,074 | 1,764 | - | - |
| Denmark | 2,205 | - | - | - | - | - | - | - |
| France 12/ | 7,685 | - | - | - | - | - | - | - |
| Netherlands | 56,438 1/ | 91,134 1/ | 46,931 1/ | 23,620 1/ | 5,655 | 10,216 | 22,593 | 48 |
| Sweden | 1,351 | 18,960 | 4,976 1/ | 6,418 1/ | 3,322 | 5,690 | 4,850 | 91 |
| Switzerland | 2,381 | - | - | - | - | - | - | - |
| United Kingdom | 33,600 1/ | 83,507 | 42,739 1/ | 15,680 1/ | 5,914 | 10,016 | 27,616 | 65 |
| Australia 7/ | 16,971 1/14/15/ | 92,244 1/14/ | 12,803 14/ | 17,412 1/14/ | 35,337 14/ | 19,344 3/14/ | 12,664 | 99 |
| New Zealand 16/ | 17,429 | - | - | - | - | - | - | - |

1/ Revised. 2/ Total production is estimated at 165,345,000 pounds in 1950. 3/ Estimated. 4/ Total production. 5/ Less than a 5-year average. 6/ Average for years 1935-38. 7/ Production year beginning July 1. 8/ Production year beginning April 1. 9/ Marketing year beginning August 1. 10/ Total cheese, and includes cheese made from the milk of sheep and goats. 11/ Both bulk and case goods. 12/ For 1937 only. 13/ Total dried-whole and dried-skim milk for human consumption. 14/ Includes infants' foods, health beverages, etc. 15/ Production of dried-whole and dried-skim milk was 62,631,000 pounds in 1950. 16/ For 1938 only.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service Reports, and other information.–September 24, 1951.

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UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 7-51 August 17, 1951

FOREIGN MARKET NOTES - DAIRY PRODUCTS

# BRAZIL: Production, Consumption And Trade In Milk And Dairy Products [1]

## Part II. (Preliminary)
## The Brazilian Northeast

By George H. Day
Marketing Specialist

## Introduction

This part of Brazil includes the large State of Bahia and the smaller States of Pernambuco, Ceará, Piauí, Rio Grande do Norte, Paraíbá, Alagoas and Sergipe and consists mainly of a rolling upland with an altitude of 1,000 to over 3,000 feet. Much of it is a semi-arid scrubland which is grazed by cattle and sheep. This area is subject to occasional devastating droughts, one of which threatened a severe loss of livestock and the starvation of several thousand people during the normally rainy season in the first half of this year (1951). Adequate rains fell after a month of grave concern, however, and, while the food supply is still depleted, forage and feed crops recovered rapidly and the threatened loss of livestock has been considerably relieved. The early harvest, too, has started.

In this area, a program of reforestation has been introduced and the use of irrigation dams is increasing. The saving of feedstuffs through the use of hay and silage, however, is generally unknown.

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[1] Preliminary report of a study of foreign market outlets and competition with United States dairy products, conducted under the provisions of the Research and Marketing Act. Mr. Day acknowledges the help of the American Consulates at Fortaleza, Recife and Salvador, trade and other sources.

Progress has been made in the erection of grain elevators and storage warehouses, but the use of cold storage warehouses for the preservation of food is practically unknown. Such facilities are limited to a few small units which are used principally in the preservation of meat, and no refrigeration whatsoever has been provided for dairy products.

The principal agricultural products in this region are sugar cane, cotton, hard fibers, cacao, castorbeans and some tobacco and coffee. Carnaúba wax is harvested from a variety of palm particularly suited to drought conditions. Oil producing nuts are collected in the forests. Cattle and sheep are raised principally for their meat, hides and skins. The principal exports are cotton, cocoa and castorbeans, babassu and oiticica oils, carnaúba wax, hard fibers, hides and skins. A large part of the cotton and sugar is shipped to southern Brazil.

In recent years, there has been a significant general increase in living standards and greater attention is being given to the use of milk, meat, fruits and other items of a balanced diet. Some increase has occurred in real as well as monetary wages as a result of increased mechanization in sugar production, together with an increase in the government controlled sugar production quota, and some increase in the mechanization of other agricultural enterprises. A gradual industrial expansion, together with an evident increase in residential and commercial construction, has also given impetus to the raising of the standard of living. An additional factor, though not as strong in the Northeast as in Southern Brazil, has been the migration from rural to urban areas in this region.

The principal markets in this area are Recife, Brazil's third largest city, with a population of about 525,000, Salvador, with about 400,000, Fortaleza, with about 215,000 and João Pessoa, Maceió, Aracajú, Parnaíba and Natal along the coast, each with a population of from 30,000 to over 100,000. There are also half a dozen interior cities with populations ranging from 35,000 to 75,000. That this area is predominantly rural may be seen from the fact that the combined population of this group of cities totaling about 1,820,000 represents barely 11 percent of the entire population of about 16,600,000. The generally low level of income among rural workers and their apparent indifference to dairy products, combined with the difficulties of transportation, renders all but the major cities of little present significance in the marketing of milk products. While the potential market for dairy products at present prices is estimated at less than 1 million people, this number probably could be expanded by the introduction and demonstration of low-fat, low cost dairy products.

Most of the freight traffic of this area moves from city to city by trucks, since highways and roads are generally passable. Movement by rail is slow and undependable and transshipments from such ports as Recife and Salvador by coastwise shipping (cabotage) is also irregular, undependable and expensive. An increasing amount of inter-city shipments are made by air.

Recife, the capital of Pernambuco, the principal milk producing State of the Northeast, is a receiving point for products which are transshipped by truck to Natal, (Rio Grande do Norte) Joao Pessoa (Paraíba) and Maceió (Alagoas).

## Summary

The demand for dairy products in Northeastern Brazil during the next few years is favored by a prospective high level of income from exports and shipments of agricultural and forestry crops and by a prospective further expansion in building and industrialization. The prospect of higher wages is continuing to attract rural workers to urban areas where, besides swelling the population, they are taking an interest in improving dietary standards.

While an increasing demand for dairy products, especially dry whole milk, dried milk products and condensed milk is in evidence, fluctuating supplies of these products have not permitted full measure of the effect of the potential demand. Evaporated milk was sold here in large volume during and soon after World War II but no licenses are now being issued for its importation.

The very low per capita consumption of dairy products in general in this area is probably due to a number of factors. In addition to the low-income level of the majority of the population and the insignificance of local production, there is a general apathy toward the consumption of fresh milk. This appears to be due in large part to its shortcomings in quality and availability. This, in turn, is the result of a lack of general support to those attempting to carry out a program of quality improvement. There seems little chance of improving these conditions until there is a more effective program of education through some experience on the part of the general public with good dairy products at reasonable prices.

A significant demonstration of the value of distributing such products as low-cost milk among children of low-income families was demonstrated early this year in this area when State Governments distributed United Nations International Children Emergency Fund (UNICEF) nonfat dry milk during the drought emergency. If importation of this product was encouraged by the reduction or removal of the tariff, it could provide a nutritious ingredient in bakery products, frozen deserts and reconstituted dairy products. It could also be an excellent product for home use.

There has been a gradual expansion in the consumption of butter and cheese in those markets, but prices have been insufficiently high to make attractive the exportation of these products from the United States.

## Business Outlook

Prices of nearly all important agricultural export crops of this region advance during 1950, and prospects continue generally favorable. Most of the Northeastern Brazilian cotton crop was sold at the relatively high levels prevailing at the end of the year. The prospect for incomes from such oilseeds as cottonseed, babassu, castorbeans and oiticica is favored by high prices and an expected average production in 1951. Producers and exporters of carnaúba wax were favored in 1950 by record exports induced in part by the inclusion, for a short time in 1950, of this commodity among the products which could be exported in barter trade, and by the demand which developed following the outbreak of Korean hostilities. The price of this wax in Fortaleza in early 1951 was more than double that of a year earlier. The foreign markets for hard fibers, particularly sisal and the domestic markets for sugar also appear favorable.

## Production, Distribution and Utilization of Milk in Northeast Brazil

As noted earlier, most of the area consists of a rolling, semi-arid scrubland type of open range known generally as the Sertão. Here the cattle are mainly native and Zebu-crossed types raised for the production of hides and beef. A number of the better Zebu-cross strains are also sold as draft animals for use on sugar and other plantations in the narrow, moist belt along the eastern coast which is known generally as the Litoral or Zona da Mata.

From these range herds, only a few of the quieter cows are milked for the feeding of infants, for use in coffee and for the ranch production of a primitive, perishable, self curdling cheese named Sertão, after the region. Most of this is consumed on ranches where produced or nearby, but a small part is sold to low-income people in interior and coastal cities. The consumption of fluid milk, as such is virtually unknown.

Production per cow is very low. The period of lactation generally ranges from two to six months. Milking is done by a member of the vaqueiro's (cow hand's) family, often only once a day, and the yield above the calf's needs seldom reaches two liters. The use of supplementary roughages and concentrates is a thing virtually unknown. Even though a surplus of milk sometimes exists during the rainy season (generally February or March to June or July, depending on the locality within the area), most of this area is far too remote, under existing transport conditions, to make possible the marketing of more than occasional lots of cheese and a low grade, semi-liquid butter to urban centers.

Between the Sertao and the narrow, moist Litoral along the east coast exists a narrow, semi-moist rolling belt extending from about the southern boundary of Rio Grande do Norte to the State of Alagoas known as the Agreste. With the exception of a small area around Conquista in southern Bahia, a relatively productive range area, there is no other natural milk producing area in this region. Only in the State of Pernambuco is the Agreste sufficiently wide and productive for the production of milk, butter and cheese of sufficient volume and quality to be a factor in the supplies of the nearby urban market (Recife). Butter and cheese are being shipped from two or three relatively large plants, one of which is federally inspected for inter-state shipment, and from a number (over 100) of rudimentary state-licensed plants. While most of the butter is produced in the larger plants, most of the cheese is made (atype of Requeijão) on fazendas (ranches) from milk from which the fat has been separated for making butter, or for sale to the larger creameries. No culture or rennet is needed due to the humidity and milk and water is added while the curd is being cooked. Salt, then butter, is mixed into the drained curd, after which it is pressed into blocks of about 4 kilograms (8 pounds). It is uncured and must be quickly sold. The end product is a semi-skin milk cheese (Requeijão) known as "Sertão".

A Requeijão of slightly lower acid content and softer texture is made in one of the larger plants. It is packed in 850 gram cellophane packages and has slightly better keeping qualities than the country type known as Sertão. The same plant also makes a variety known as Fazenda which is made of fresher milk with greater care in processing and contains about five times as much (about 25%) butter. This cheese, which is pressed into large slabs, keeps longer and is sold at a premium over the other varieties.

Two or three milk receiving plants on the eastern fringe of the Agreste, one a producers' cooperative, make shipments of fluid milk to Recife in cans, by truck. Some milk cows, coming fresh, are also furnished to suburban producers around Recife as they dispose of animals going out of production.

From the somewhat smaller Agreste areas of the State of Paraíba and of Alagoas, the products of two new federally inspected butter-cheese plants are expected to move to nearby coastal urban centers in the near future. Production is not expected to be great, however, due to the limited size of the potential milk producing Agreste in these States.

Most of the cattle used in milk production are grade Holsteins and Brown Swiss, the percent of such blood varying considerably. An increasing percentage is being crossed with Gir (Zebu) cattle, and at Limoeiro (in the Agreste) the State has established a pureblood Gir experiment station used in the selection of this breed for milk, later to be mixed with Holstein and Swiss for increased milk production. Selected crosses of Gir with these breeds reportedly have produced cows with a daily production of up to 24 liters. The bulk of the dairy cows in this area are believed to produce from 2 to 5 liters daily for a lactation period of from 4 to 6 months. Only a few of the progressive dairymen feed roughages and supplementary concentrates. Producers here receive from 1-1/2 to 2 cruzeiros per liter, depending upon whether the milk is for processing or fluid milk. 2/

In southern Bahia, in a sizeable area 50 to 100 kilometers around the city of Conquista, is found an extensive area in which are located 2 or 3 sizeable butter factories that churn and can butter for sale in Salvador, Ilheus and other urban centers along the coast. While most of this butter is made from farm separated cream, it is estimated that about 30 percent is made from plant separated whole milk. About 15 smaller factories in this area churn butter, which is shipped in bulk. An additional relatively large butter canning creamery is located in Mundo Novo, the output of which is distributed in Salvador in consumer and bulk size tins. The total number of Bahia creameries has been estimated at around 30, about 4 of which market butter in cans.

The production of cheese is also found in Bahia on a limited scale, principally around Conquista. Here a number of small plants, most of which are located on farms or ranches produce Requeijão, both of a pressed, or hard, and soft variety. The bulk is made from milk separated for making butter. Only the hard type, pressed into bricks, is shipped for sale to coastal centers. Most of it is fried in its preparation for home use. A small amount of Prato, a soft Gouda style cheese pressed into 6-8 pound wheels and a soft cream cheese generally packed in 1-pound paper or cardboard containers is also sold. About 60 percent of Bahia's butter and cheese is produced in the Conquista area.

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2/ At the official exchange rate, one cruzeiro equals about U.S. $.053.

Most of the cows in the Conquista area are a mixture of Indu-Brazil and native cattle, which are grazed primarily for the production of beef. Production per cow is estimated at 1-1/2 to 2 liters daily for a period of 5 to 6 months, depending on production over the calf's requirements. The cattle depend on the range for feed. Little or no milk is produced in the arid western half of Bahia. Producers in the Conquista region receive about 1 cruzeiro per liter.

There are no milk condenseries nor drying plants in Northeastern Brazil. All of the canned milk and most of the butter and cheese are imported or transshipped from São Paulo and Minas Gerais. The conditions relative to the production of fluid milk are discussed briefly in connection with the market for dairy products.

## Prospective Production of Milk and Dairy Products in Northeastern Brazil

There is little likelihood of an appreciable development of milk production in the semi-arid scrubland covering most of the area of these States for several years. The lack of dependable moisture and natural feed and the almost complete lack of adequate transportation represent only a part of the difficulties. Stock and irrigation dams, a number of which are being constructed to catch the seasonal rainfall, could be used in some areas for the production of hay and silage, but a great deal of time will be required to induce the roving ranch hands to settle down to the production of a product in which they have shown so little interest.

The humid and narrow coastal plain, already devoted to the production of sugar, cacao, rice, manioc, bananas and similar crops, is not suitable for more than the production of a moderate amount of fluid milk for use in the immediate vicinity.

While some increase may be expected in the Agreste area, principally in Pernambuco, the problem of transportation, the slow development of practices with respect to the production and conservation of roughage and the cost of importing concentrates are factors which may be expected to retard its development. Suitable crossbreed dairy cattle are being developed, however, and a program aimed at training for improved feeding and care of dairy cattle, the more sanitary production and handling of milk, the introduction of cooling and improved processing facilities and their proper use, better roads and improved marketing techniques, especially as they relate to the handling of fluid milk,could result in a considerably greater development of milk production in this area.

There seems little reason to expect an appreciable increase in the production of milk and dairy products in the relatively remote Conquista region in southern Bahia. The tendency to depend entirely on range for feed, the distance from the principal markets and the natural emphasis on meat production all serve to retard dairy development. While the more general use of Zebu strains may increase production of meat, it appears reasonable to expect a reduced yield of milk per cow and a smaller percentage of freshening as a result of their use.

Northeastern Brazil, as a whole, is expected to be a deficit area for milk products for many years, especially during the annual season of drought.

## Dairy Product Market Conditions and Prospects by Principal Cities

The preliminary comments on the markets of this area will be limited to Fortaleza, Recife and Salvador, each of which was visited briefly, and to Aracajú for which a limited amount of data has been obtained.

Fluid milk for Recife is supplied daily by truck from a private receiving and cooling plant, a producer's cooperative on the eastern edge of the Agreste, another cooperative in Recife, from 2 or 3 smaller nearby receiving stations in the Litoral and from a number of small producer-distributors located in the suburbs of the city. Pasteurizing equipment is located in the bottling plant of the producers' cooperative in the city, but is not now in use. Virtually all of the city's supply of 30,000 to 35,000 liters (about 32,000 - 37,000 quarts) daily is delivered to doors, mostly in hand-drawn carts, at a retail price of 3.60 cruzeiros per liter. 3/ As in other cities of this area, the lack of pasteurization and tamper proof bottles lends little general confidence to the city's milk supply. The supply amounts to slightly more than 1/10 of 1 pint per person per day.

There is virtually no organized fluid milk distribution in Salvador nor in Fortaleza, although in Aracajú (Sergipe) a pasteurizing plant, the property of a cooperative officially having the exclusive right to sell milk, reportedly accounts for most of the fluid milk distribution in that city.

In Fortaleza about 150 nearby producer-distributors milking about 3,200 cows, most of which are kept in stables and are fed some roughage, oilseed meal and mill feeds, are credited with producing 12,000 liters daily. Virtually all of it is delivered as fluid milk to homes from pack-mules or mule-drawn carts, from which it is poured into bottles or other containers. While the Ceará State Department of Agriculture is breeding cows without charge from a select herd of Holsteins and is endeavoring to raise the standards for herd care, many cows are infected with tuberculosis, brucellosis, aftosa and other diseases.

In Salvador, the problem of sanitary fluid milk distribution is also very severe. Milk is distributed in unsealed containers from about 150 stables located in the city or its suburbs. In addition, a lot of milk is received from outside the city by virtually every type of conveyance, including small boats as well as by bicycle, pack animal and cart, thus making the problem of

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3/ At the official rate this represents about 19 cents a quart.

city inspection a serious one. Most of the milk is delivered direct to homes in bulk and in assorted bottles at prices ranging from 2.50 to 6.00 cruzeiros per liter, the bulk of it near the top of this range.

In Aracajú (Sergipe) most of the milk is received at a cooperative pasteurizing plant from herds located several kilometers in the interior. This plant accounts for about 2,600 of the 4,000 liters consumed daily, the balance (1,400 liters) is distributed by independent producers located nearby, under conditions similar to those in Salvador and Fortaleza. Milk, delivered in a variety of containers and bottles, ranges in price from 2.00 to 2.50 cruzeiros per liter.

Based on data obtained from city health officers, State Departments of Agriculture and milk cooperatives, the quantity of milk distributed daily in each of these cities is approximately as follows:

| City | Total (pints per day) | Per capita (pints per day) |
|---|---|---|
| Recife (Fernambuco) | 74,000 | .141 |
| Fortaleza (Ceará) | 25,400 | .118 |
| Salvador (Bahia) | 42,300 | .107 |
| Aracajú (Sergipe) | 8,450 | .122 |

From this it may be seen that per capita consumption of fluid milk, while slightly higher than in Belém, is far below a rate of nutritional adequacy.

The present consumption of ice cream in Northeast Brazilian markets is negligable. The few attempts at introducing ice cream with a fat content and formulas similar to those in the United States have been unsuccessful from the standpoint of popular approval, reportedly due to a lack of taste for frozen desserts with high butterfat content. A small amount of dry whole milk is used in Recife for small quantities of ice cream sold in milk bars, restaurants and hotels. A few small freezer plants sell ice cream made from imported dry ice cream mix, virtually on a custom basis. At least one small distributor finds a ready sale for consumer size cans of the dried mix whenever import licenses can be obtained.

By far the greatest volume of frozen desserts are sold in the form of a variety of fruit sherbets. Made generally from a combination of coconut milk, fruit juices and sugar, these sherbets are sold principally by street vendors who ladle the product into little cups. Sweet, low-fat milk ices made principally from part or full skim milk are sold in sizeable volume from small ice cream-confectionary shops. Flavors are generally chocolate and vanilla. In the opinion of some distributors, frozen desserts represent a potentially large market for nonfat dry milk if the cost of the dry milk is moderately below that of the present landed price.

An increase in the demand for dry whole milk in the Northeast Brazilian markets in recent years has been especially noticeable in the last 12 to 15 months The recent increase appears to be the result of a more general recognition, even among poorer classes, of the value of milk in the diet; some increase in the general level of purchasing power resulting from the recent increase in the value of exports, discussed above, and the general building and industrial expansion; the recent drought provoked reduction in fluid milk supplies, and to some extent lack of confidence in local fresh milk. While both receipts of national and imported dry whole milk have not kept pace with this increase, and shortages have existed intermittently in most markets, the recently improved foreign trade balance and a concurrent relaxation of import controls on dry whole milk and dried milk products, as well as the upward trend in national production, have been making possible greater receipts in these markets. Following a year of rigid controls in 1949, imports in 1950 resumed an upward trend and at last reports import licenses are being awarded for greater quantities in 1951. Danish, Dutch and Canadian brands have been entering these markets, favored in early 1950 by the exchange position of soft currency countries and by lower costs. In late 1950 and in 1951, however, the trade balance has favored dollar exchange. The generally lower priced Brazilian brands continue to hold most of the markets, however, followed by the better known brands from the United States.

The principal increase in demand is from middle and upper income groups where it is finding greater use in infant feeding, in coffee and in other beverages and in food preparation. There has been some increase in the demand for dry whole milk among working classes for the feeding of infants and a little for other uses, including coffee. While the biggest volume is in one-pound cans there has been an increase in the sale of two and one-half and five-pound cans, about half of which is being used in such industrial products as ice cream, bakery goods, candies and, when fluid milk is short, for mixing milk beverages.

No adverse reaction has been felt in those cases where the butterfat content has been lowered to less than 26 percent, a move apparently made necessary to comply with regulations if the product is to be classified "powdered milk for infant feeding". The lower fat content appears warranted by the warm climate and the widespread use of vegetable oils. There has been a reported shift from modified dried milks to low fat dry whole milk with the approval of some nutrition authorities. Retail prices for dry whole milk in one-pound cans range from 18 cruzeiros for a national product and a Dutch brand to 26 cruzeiros for better known imported brands.

The increasing population of these markets, the improved dietary standards the current and prospective increase in incomes, and the lack in quantity and quality of fluid milk production, point to a continued good market for dry-whole milk in this area for the next few years, at least.

As indicated in an earlier report, no data are available covering the trade in dry whole milk separate from those for modified or dry milk products or nonfat dry milk, all of which are included under the category, powdered milk. Contrary to what was indicated in the Belém report, however, separate data are available on domestic production of each of these items.

Sales of modified dried milks for infant and dietetic feeding reportedly are increasing. While advertising is directed solely to doctors, and most of it is sold on doctor's prescriptions in middle and upper income groups, there has been an increased tendency for the product to be distributed through grocery stores. Retail prices of this product packed in one-pound cans range from 17.50 cruzeiros for the national product to 25.00 cruzeiros for imported modified dried milks. 4/

The combined consumption of these 2 types of dried milk products in Recife in recent years has amounted to from 630 to 920 tons annually. Data on imports and estimates of domestic production suggest that about 90 percent of the consumption is dry whole milk and about 10 percent modified milk. The consumption of the former, although moderately retarded by present import regulations, is clearly gaining relative to the consumption of the latter. Although the consumption of both types of products is clearly greater for the national than the imported products, distributors report no difficulty in quickly disposing of all imported dried milk. Allocations are the rule rather than the exception.

Assuming one pound of these products to be equal, in nutritive value, to seven pounds of milk, an equivalent of from 10 to 15 million pounds of milk are provided annually in the Recife market from these sources. This is approximately equal to .05 to .07 pint per person a day, most of it consumed by those in higher income groups. While data on other Northeastern cities are incomplete, it seems probable that their per capita consumption rate would fall within this range.

Nonfat dry milk was largely unknown in this market until early in 1951. A few large bakers of cookies, biscuits and sweet crackers have been importing small quantities of nonfat dry milk in hard fiber drums for use in these products. While neither bread nor rolls are now being made from dry milk, principally because of the price of the imported product, a limited amount of fresh milk has been used in these products by a few bakers. Some nonfat dry milk is being used in low fat ice creams and if the imported cost of nonfat dry milk were lowered appreciably, distributors believe it would become a popular ingredient in frozen desserts.

As a part of a program to improve the nutrition of children of nursing and pregnant women and for similar purposes, the United Nations International Children's Emergency Fund, through the State Governments of Northeastern Brazil, reportedly imported 2 million pounds of nonfat dry milk for distribution. The milk was distributed on behalf of the National Department of Child Welfare. Although acceptance at first appeared slow, the occurrence of a prolonged drought over most of the area provided a clear opportunity to demonstrate the acceptability of this product to many who had rarely used milk in any form. Brazilian milk producers and processors reportedly have recognized the value of this program in preventing undernourishment and in the building of a more general interest in dairying.

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4/ Due to greater density, the contents of a "pound" can of the local product is generally slightly greater than one pound in actual net weight.

Brazil's production of nonfat dry milk has so far been limited to the output of one or two plants in Minas Gerais and São Paulo most of which is used in the production of ice cream. The principal potential source of nonfat dry milk is the large seasonal surplus of skim milk available for the manufacture of butter at receiving stations which supply fluid milk to the Federal District. While some of this milk is being used in the production of casein and the low-fat cheese known as Requeijão, a large part is being fed to hogs, or wasted.

The outlook for imports of nonfat dry milk, while only moderately favorable, could be improved appreciably by a reduction in import duties and a separate tariff classification for this commodity. It could be used as a low cost milk for those unable to purchase whole milk products and could furnish a nutritious ingredient in ice cream, bakery products and beverages.

Under present Brazilian foreign trade and exchange policies, no licenses are being issued for the importation of evaporated or condensed milk. During the late war and early postwar years sizeable imports of evaporated and condensed milk which were made to those markets at a time of a shortage of the national product, were quickly sold. While the present import policy, based on the premise that local supplies are adequate, may be intended as an encouragement to national production, distributors in these markets stated that, due in part to the scarcity of most types of milk, they would have little difficulty in disposing of either condensed or evaporated milk imported in a moderate price range. A shipment of a well known brand of evaporated milk was imported to Brazil last fall in exchange for lumber, when lumber was approved for export under the barter authorization then in effect. The premium asked by the lumber exporter was so high as to make the unit cost for the evaporated milk too high for ready sale. 5/ The resulting retail price was 12.00 cruzeiros per can (about U.S. .60 cents at the official exchange rate)! The production of evaporated milk in Brazil is negligible.

The production of sweetened condensed milk, on the other hand, has been increasing steadily and for 1950 is estimated at about 900,000 cases of 48 14-ounce cans, most of it produced under federal inspection. Although consumption estimates for condensed milk are available only for Recife, and consumption has been increasing steadily over the last five years, the sale of this product is relatively less important than that of dried milk. Recife's consumption in 1950 is estimated at about 1,975,000 kilograms, or about 4,350,000

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5/ Barter transactions were authorized on a few commodities which were undersold in world markets in 1950 as a means for bolstering the income from those commodities. In order to import merchandise not otherwise licensed, prospective importers were supposed to pay the difference between the national and world market price to exporters of the listed commodities. Competition amont those desiring to import soon placed a premium on the barter commodities. This in turn resulted in shortage of, and high prices for, the commodities approved by the Brazilian Government for export under this arrangement. Barter transactions were discontinued in December, 1950.

pounds. This represents an equivalent of about 10 million pounds of milk, or slightly less than .05 pint per person per day. Per capita consumption of the other cities in this area is believed to be somewhat less than that in Recife, as most of Pernambuco's (State) reported production, estimated at 1,200 tons of product, is apparently bulk condensed milk consumed in that city. Retail prices for condensed milk in Northeastern markets range from around 6.20 cruzeiros in Salvador up to 6.70 cruzeiros in Fortaleza per 14 ounce can.

Retail prices on all dried milk products and condensed milk, as well as fluid milk, are under the control of State price and supply commissions (CEPA) which follow the pattern of mark-ups (20 percent) established by the national commission in Rio. No controls are established on wholesale prices for any dairy products, except in emergency, or on retail prices for butter and cheese.

The pattern of cheese consumption varies somewhat from market to market, depending in large part on the quantity and quality of cheese or Requeijão produced in nearby areas of the State. In Recife, Pernambuco, where an annual average of over 400 metric tons is received from other parts of Brazil (imports are negligible) and where annual production, mostly in the nearby Agreste, amounts to about 1,400 tons, annual consumption is estimated at about 3,750,000 pounds. This represents an annual per capita consumption of slightly over 7 pounds. Out-of-State shipments are reportedly subject to the close regulation of the State price and supply commission. In terms of milk equivalent, this represents a daily per capita consumption of slightly less than .13 pint. While insufficient figures are available to estimate per capita consumption in Fortaleza, where nearby State production is relatively much smaller, it is believed to be considerably less. Consumption in Salvador probably more nearly approximates that of Recife, due to the fact that in-shipments are augmented by moderately large shipments of Requeijão and small shipments of Prato from the Conquista area and other parts of the State. Most of the cheese sold in this market is understood to be of the Prato and Minas types produced in Minas Gerais.

Retail prices of Prato cheese in these markets range from 35.00 to 40.00 cruzeiros per kilogram in wheels to 50.00 cruzeiros per kilogram in Edam styles. Retail prices of Minas cheese range from 28.00 to 35.00 cruzeiros per kilogram. Prices of nearby Requeijão range from about 12.00 to 14.00 cruzeiros per kilogram in Aracaju and Salvador and 18.00 cruzeiros per kilogram in Recife to over 20.00 cruzeiros in Fortaleza. At the official exchange rate, this would mean a price per pound in U.S. cents of about 80 to 90 cents for Prato, 65 to 80 cents for Minas and 25 to 45 cents for Requeijão. The prospect for importing cheese into these markets is limited.

The pattern of butter consumption likewise varies from market to market. In Recife where an annual average of over 1,000 metric tons (net) is received from other parts of Brazil and where annual production amounts to over 700 tons, annual consumption is estimated at about 1,900 tons or slightly over 4 million pounds. This represents an annual per capita consumption of slightly more than 7.6 pounds. In Salvador, Bahia, where local production is believed to represent less than 10 percent of the total supply, per capita consumption is belived to be between 4 and 5 pounds annually. In Fortaleza where local production is of no significance, and prices are relatively higher per capita consumption is assumed to be between 2 and 3 pounds per year.

Most of the butter supplied to these markets is shipped from Minas Gerais in 10 to 20 kilogram cans, although there is a significant sale in consumer-size tins of from 1/4 kilogram to 3 kilograms. The large cans are sold to bakeries, hotels and restaurants and to retail stores, where it is ladled out to consumers. The price per kilogram in large cans apparently ranges from 25.00 to 30.00 cruzeiros (U.S. 60 to 70 cents per pound), depending on quality and source, with Minas Gerais butter commanding a premium. The price in one kilogram cans ranges from about 37.00 to 50.00 cruzeiros per kilogram (U.S. $.85 to $1.15 per pound) while the price of bulk and carton butter from small plants in Bahia and Sergipe ranges from 25.00 to 30.00 cruzeiros per kilogram.

It is interesting to note that bakeries represent one of the principal users of butter and that one large bakery reportedly has taken over the output of one plant. Of interest also are recent newspaper reports intimating that special arrangements are being negotiated with Argentina and other countries to import butter free of duty as an answer to present winter-season shortages and record prices.

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FOREIGN MARKET NOTES - DAIRY PRODUCTS

# BRAZIL: Production, Consumption and Trade In Milk and Dairy Products [1]

## Part I. (Preliminary)
## Belem and the Amazon Valley

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U.S. DEPARTMENT OF AGRICULTURE

## Introduction

For the purpose of this preliminary report, Brazil, with a population of 50 million people and an area greater than that of the United States, is divided into three general and loosely related production and marketing areas: (1) The vast Amazon Basin, which is generally no more than a few hundred feet above sea level and where the climate is uniformly damp and hot; (2) The Brazilian Northeast, an area semi-desert in character with an altitude generally of 1,000 to 3,000 feet and subject to devastating droughts at irregular intervals; and (3) The Central and Southern Coastal Uplands which contain the most fertile and productive lands and almost 60 percent of the country's population.

The comments in this circular deal primarily with milk producing conditions, and with the market and consumption patterns of dairy products in and around Belem, a city of about 230,000 people and briefly with Manaus, a city of about 150,000 people and a few other Amazon River towns with a combined population of about 450,000 people. Of the population in these towns, probably not over 150 to 200 thousand can buy more food than is necessary for a minimum of subsistence. The 1950 population of the States of Amazonas and Para was about 1,670,000.

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[1] Preliminary report of a study of foreign market outlets and competition with United States dairy products, conducted under the provisions of the Research and Marketing Act. Mr. Day acknowledges the help of the American Embassy at Rio de Janeiro, the Consulate at Belem, trade and other sources.

NOTE: This continues the series of reports of a study of market outlets for U.S. dairy products in Caribbean and Latin American countries begun in 1950.

The principal shipments and exports from this area are rubber, jute and other fibers, animal hides and skins, alligator leather, lumber, vegetable oil seeds and oil, and Brazil nuts. A large percent of the income from this area is dependent on the production and sale of agricultural products and raw materials, generally under primitive conditions.

The city of Belem has a good port with good docks, good warehouse facilities and good unloading and dock equipment. It is gradually becoming less useful, however, since no provision is being made to remove by dredging the gradual accumulation of river silt around the docks. Much of the shipping is now being handled by lighters. The city of Manaus, 1000 miles up the navigable river is also accessible to some ocean-going freighters. Shipments going to either of these towns or to other cities along the northern coast of Brazil generally are made direct, since any cargo imported at Rio de Janeiro or Santos would have to be reloaded and trans-shipped a distance of several thousand miles by coastal vessels. On the other hand, due to the necessity of obtaining licenses, when required, filing exchange applications and the handling of financial and other details incidental to the importation of dairy products, purchases generally are made through one of the large commission agents in Rio de Janeiro 2/. All packages must be prepared to withstand heat and constantly high humidity.

## Summary

Some outstanding characteristics of this market appear to be:

1. A growing urban population with the slowly increasing production of meat and milk in nearby areas unable to keep pace with current food requirements and demand. This is bourne out by the constantly increasing volume of the in-shipments of dairy products, principally from southern Brazil.

2. An extremely low per capita consumption of most dairy products, due in part to regulations which limit receipts to those of national production. Shortages reportedly are not infrequent.

3. A need for greater quantities of proteins and other food elements which could be obtained from a product like nonfat dry milk. This product could be introduced in a variety of ways. At present, virtually none is being imported either commercially or under the United Nation's child feeding program.

4. Imports of dairy products from the United States and other countries in recent years generally have been limited to small quantities of such dried milk products as modified milks which are exempt from import licenses, and dry whole milk.

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2/ Preparing Shipments to Brazil, which lists and describes the shipping documents required and their use, may be obtained from the American Republics Branch, Office of International Trade, Department of Commerce, Washington 25, D.C. or from field service offices of that Department.

5. The continuous heat and the general availability of vegetable fats and lard suggests the advisability of some reduction in the butterfat content of dairy products below those consumed in the United States.

6. Condensed milk, principally of national production, has a well established market, especially among low-income groups.

7. Evaporated milk has never been imported in significant quantities. Its introduction, assuming import licenses could be obtained, would require promotional effort.

8. Virtually all of the butter and most of the cheese is received from southern Brazil and there is little evidence that nearby production of these products will increase appreciably in the near future.

## Production, Distribution and Utilization of Milk in the Belem Area

Nearly all of the 1,180,000 cattle 3/ in the Amazon Basin are kept primarily for meat, with the production of milk and dairy products for the use of the farm (fazenda) family of only minor importance. An exception may be found in the Belem "milkshed" where a number of small herds are kept in the suburbs primarily to supply the city with fluid milk. These are discussed in more detail in the commodity section, paragraph on fluid milk.

Only on the eastern half of the large island of Marajo, across the Para River from Belem, where about 600,000 of the total number of cattle in the Basin are located, has any attempt been made to market milk in the form of processed dairy products. Here about 4,000 of the island's estimated 180,000 beef purpose cows are milked sometime each year for the processing and sale of farm cheese and negligible quantities of butter and of heat-sterilized milk bottled for shipment to Belem. Since these cows are fed entirely on pasture with occasional roughage, and without any kind of supplement, the average annual production per cow amounts to about 1000 liters (slightly over 2,200 pounds). Total "commercial production" amounts to slightly over 1,200,000 liters (about 2,700,000 pounds) per year. Since the period of milking is about equal to the 5 to 7 months in which there is more milk than required by the calf, it is estimated that the average number of cows milked commercially at any one time is not more than 2,000.

Nearly all (about 98 percent) of this commercial milk is used in the production of farm cheese, most of it a type called Queijo do Marajo (or Requeijao). The milk generally is soured by the natural action of lactic bacteria for a period of 24 hours often in old wine barrels, the high humidity and heat being sufficient for coagulation well within that time.

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3/ As of December 31, 1948, the number of all cattle in the States and Territories of the Basin was estimated, in thousand head at: Para 830; Amapa 61; Amazonas 127; Rio Branco 130; Acre 30; Guapare 4. It is not anticipated that the agricultural census of 1950 will reflect much change in these numbers.

The curd is scooped into a bag, drained, and is then dumped into a can or tank with a small amount of fresh milk, which also quickly curdles, and is heated to about 140°F. until of satisfactory "gummy" consistency when it is salted. It is rebagged, drained and squeezed, after which it is broken up into small pieces and fried in butter until it is rather stringy. It is then pressed into molds. A "cream" cheese, which comprises the balance of the Marajo farm cheese production, is produced by the process described above, except that the cheese is fried in cream rather than butter. All of it is sold uncured. The largest of these farm plants produces on the average about 400 kilograms a month (about 880 pounds) on a year round basis, in addition to a small amount of cream cheese.

About 13 pounds of milk, including the fresh milk for cooking is needed per pound of cheese produced. About 26 pounds of milk are required for each pound of butter produced. A small amount of low quality butter is also made from cream skimmed off of the top of the vat in cheese processing. These products are marketed in Belem.

In addition to the milk produced for products sold, it is estimated that about 1,800,000 liters of milk are produced on Marajo for direct consumption by vaqueiros (cowhands) and their families, each family using about 6 liters daily. This milk is also sold to families in nearby villages.

Thus the total production of milk on the island of Marajo amounts to slightly more than 3,000,000 liters annually, for which about 10,000 cows are milked at some time during the year. Of the total cow population on Marajao, only about 5 to 10 percent are milked. The percent of cows milked and the production per cow in other sections of the Amazon Basin is probably considerably below the average for Marajao.

In addition to the above, slightly over 7,000 liters (about 15,500 pounds) of milk are produced daily from an average of slightly over 1,750 cows in about 150 stables located in the suburbs of Belem. These cows are generally of a dairy type, are fed a moderate amount of local and imported concentrates and are kept in production for a period of 8 to 10 months. A year round production of 7,000 liters daily implies the use of a total of about 2,360 of these cows with an annual average production of slightly less than 2,380 pounds per cow. This means a total "milkshed" production of about 5,600,000 pounds annually. This milk is used almost entirely for fluid distribution in and around that city. (See paragraph on fresh fluid milk in the section entitled "Outlook by Commodities.")

## Prospective Production of Milk and Dairy Products in the Amazon Basin

No significant increase is anticipated either in cow numbers or in milk production in the Amazon Basin during the next few years. Snakes, alligators, floods and recurring outbreaks of foot-and mouth and other diseases, plus the continuous sale of cattle for beef are expected to continue, as in the past, to act as a deterrent to further increase. A number of Nelore, Gir and other Indian breeds of cattle have been imported from ranches in the States of Bahia, Minas Gerais and Rio de Janeiro for herd improvement. In addition, the director of the Northern Agronomic Institute of Belem has reportedly gone to India to obtain about 100 head including Red Sindhi (dairy breed) and a number of other Indian breeds. These cattle are to be used at the experiment station at Belterra to establish this station as a leading center of selecting and breeding of Indian cattle. Any increase in milk production from these activities is expected to be slow. However, the Indian cattle, other than the Red Sindhis, neither freshen as regularly as other breeds nor is their milk production high. These cattle, however, may be of help in offsetting the constantly growing deficit of meat in this area.

Foot-and-mouth disease, brucelosis, tuberculosis and other diseases, in combination with the heat and humidity and scarcity and high prices of concentrate are expected to retard increases in both cow numbers and milk production in the immediate Belem area.

## The Outlook by Commodities

Fresh fluid milk is now being supplied to Belem from about 150 relatively small stables or dairies milking an average of 10 to 15 cows. About 1,750 cows are now producing slightly over 7000 liters 4/ daily or an average per cow of slightly less than 2,380 pounds annually. Until March, 1951, this milk was virtually all distributed from small hand or horse-drawn carts and was delivered in unsealed bottles of varying shapes, in raw state, directly to housewives at a price of 5.20 cruzeiros 5/ per liter. Adulteration and dilution with water was reportedly very common.

On March 13 of this year, a pasteurizing plant started operation and is now receiving about 2000 liters of the city's 7000 liter daily supply. The plant, which is now buying raw milk from over 100 stables at a price of 5 cruzeiros per liter delivered to the plant, will accept only milk which does not give evidence of adulteration. The milk is pasteurized and bottled in 1 liter and half-liter bottles with metal caps and is delivered mostly to homes at a price of 6 cruzeiros per liter bottle.

A city ordinance, which became effective July 1, requires that all fluid milk for Belem be pasteurized. This, in effect, requires that all raw milk be delivered to the pasteurizing plant. With a capacity of 12,000 liters daily and a demonstrated consumer preference for pasteurized milk, the plant manager hopes to induce a gradual production increase in the milk shed and plans later to establish a cooling station to receive milk from producers on Marajo Island. In this way the plant manager hopes to obtain a supplementary supply of 10 to 20 thousand liters daily, to be delivered in refrigerated boats, and later to diversify to the production of other dairy products. No fresh cream is now available.

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4/ 1 liter equals 1.0567 quarts.
5/ 1 cruzeiro is officially equal to about US $.053. Open market rates are now somewhat lower.

It is important to note that the 7,000 liters (about 7,400 quarts) represents virtually the entire fluid milk supply of Belem. This amounts to slightly more than 1/20 of 1 pint per day per person. Most of this milk, of course, goes to those in higher income groups.

Ice cream, like fluid whole milk, is available only to the few persons of relatively high income. It is made and sold in two of the hotels and by a few plants, the main ingredient being dry whole milk imported in 5 pound cans. A fairly satisfactory ice cream is obtained by the addition of egg yolks, sugar and vanilla or fruit flavorings.

Lower income consumers depend upon a very low-cost confection, called "creams" containing about 1/10 of the normal milk solids and fat content, and upon a sherbet made with fruit, water and sugar and containing no milk at all. The former contains dry whole milk, egg yolk, flavoring and sugar. The latter, which represents by far the largest volume by sales, could be improved in flavor and food value by the addition of milk solids. The present average per capita consumption of milk in frozen desserts is negligible.

Dry whole milk has an established market and is purchased, whenever available, to supplement the inadequate, and reportedly low quality fresh milk available. It is used by the whole family in cooking and as a substitute for fluid milk generally, as well as in infant feeding. It is believed to have largely replaced condensed milk among upper income groups and is sold in small quantities to those with lower incomes. It has been found adaptible in cooking where receipes call for unsweetened milk. Its use in 5 pound cans for the commercial production of ice cream has been cited above, and small quantities also are used in the baking industry. Although occasional imports are licensed from the United States, Canada and Europe to supplement the quantity imported from southern Brazil, shipments have been intermittent, and, in view of the shortage of fluid milk, generally inadequate. Retail prices for 1 pound cans range from 20 to 26 cruzeiros per can.

Milk base infants' and dietetic foods, produced in southern Brazil and imported, license exempt, from a number of suppliers in the United States and other countries have found a moderate steady market as a result principally of doctors' prescriptions. The Belem market for this class of product probably could be expanded through encouraging a more general understanding of its properties and uses by local nutritionists.

In Brazilian production and trade data no separation is made between dry whole milk, modified dried milk products and nonfat dry milk solids, all of which are included under the category "dried" or "powdered" milk. Receipts and imports to Belem, less trans-shipments, indicate a present annual consumption of slightly less than 300,000 kilograms or about 660,000 pounds. Assuming 1 pound of these products to be equal, in nutritive value to about 7 pounds of milk, an equivalent of 4,620,000 pounds of milk, or 2,150,000 quarts are provided annually from this source. While this is approximately equal to an additional .05 pint per person per day, these products, as in the case of fluid milk, are consumed mainly by higher income groups.

Nonfat dry milk, a product almost unknown in this market, could play an important part in improving the diets of Belem's ever expanding number of low-income families. The increasing scarcity of meat, milk, chickens and eggs emphasizes the importance of supplementary animal protein, as well as other elements in this food. Both fats and vitamin A appear available in satisfactory quantities to those unable to buy whole milk products. The general availability of vegetable fats and lard and the continuous heat appear to minimize the need for fatty foods, while vitamin A probably is available in a number of local yellow and green vegetables

Nonfat dry milk could be successfully introduced, in the opinion of some distributors, in consumer cans or packages through groceries to low income families 6/. It can also be introduced in industrial foods, in sherbets, in bakery goods, confections and in such low-fat dairy products as cottage cheese and milk drinks. Its introduction in sherbets has been mentioned above. There are about 55 bakers in Belem, 4 of which are sufficiently large to be potential users of nonfat dry milk, but at present only small quantities of dry whole milk, when available, are being used. A reliquefying plant for the use of this product in low fat milk, skim milk, chocolate drinks and cottage cheese would appear to fill a definite need for moderate or low-cost milk nutrients. Present import license regulations serve as the major deterrent to its introduction.

Condensed milk, for which a market has long been established, is at present probably the principal source of milk nutrients to a large segment of Belem's low-income families. Shipments to Belem are limited by present import regulation to production in Brazil, virtually all of which comes from the output of a single foreign-owned company located several thousand miles from this market in southern Brazil. This product, which retails at 6.5 to 7 cruzeiros per 14 ounce can is reportedly in frequent short supply.

Belem's annual consumption of this product is estimated at slightly less than 600,000 kilograms or about 1,300,000 pounds. With 1 pound of condensed milk equal to about 2.3 pounds of fluid milk, an equivalent of 3,000,000 pounds of milk, or about 1,390,000 quarts are provided annually from this source. This is approximately equal to an additional .03 pint per person per day. Since this is the only form of milk available to many low-income people, the extreme inadequacy of milk supplies is self-evident.

Although no commercial imports of evaporated milk have been licensed for some time Belem distributors express a belief that this product would find a ready market.

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6/ The high heat and humidity make it of primary importance that any packaging material be completely water repellent. Tin cans appear to be the only presently known proven container.

Cheese consumption in the Belem market is limited largely to Brazilian domestic varieties. In addition to about 83,000 kilos (183,000 pounds) of Requeijao and about 9,000 kilos (20,000 pounds) of "cream" cheese marketed annually from nearby Marajo Island, about 230,000 kilograms or 510,000 pounds is shipped in annually from Minas Gerais, Sao Paulo and other States in southern Brazil. The quantity of imported and specialty cheeses is negligible. The retail prices of nearby Marajo cheeses range from 35 to 40 cruzeiros per kilo while the price of an Edam style cheese from Minas Gerais, packed in tin, ranges from 70 to 80 cruzeiros per can of about 2 kilograms.

Total cheese consumption in Belem, including Marajo and that shipped in from southern Brazil, is estimated at slightly over 710,000 pounds annually. Assuming 1 pound of cheese to be equal in nutritive value to about 7 pounds of milk, an equivalent of about 5,000,000 pounds of milk or 2,320,000 quarts are provided annually from this source. This is approximately equal to an additional .06 pint per person per day. While some of the Requeijao is consumed by low-income people, the supply of low-cost cheeses is seen to be far from adequate.

Virtually all of the butter consumed in Belem, amounting to 350 to 400 thousand kilograms (800,000 pounds) annually, is received from Minas Gerais and other States of southern Brazil. The quantity shipped from nearby Marajo, while of good quality, is negligible. Most of the butter is received in 10 to 20 kilograms cans and is ladeled out in bulk at about 40 cruzeiros per kilogram. Occasional sales are made in consumer-size cans of about 1/2 kilogram or more at prices slightly higher. Most of the butter is consumed by middle and upper income groups.

A summary of total and per capita daily consumption in milk equivalent of milk products and cheese in the Belem area is given below. Butter has not been included, since not only is its consumption confined largely to higher income groups, but it contains relatively small quantities of the proteins, lactose, minerals and other elements:

| Item | Milk Equivalent (Pints per day) | Per Capita (Pints per day) |
|---|---|---|
| Fluid milk | 14,800 | .0643 |
| Dried milks | 11,800 | .0513 |
| Condensed milk | 7,600 | .0331 |
| Total milk | 34,200 | .1487 |
| Cheese | 12,700 | .0552 |
| Grand Total | 46,900 | .2039 |

This represents an annual per capita consumption of less than 75 pounds compared with a United States average of about 250 pounds.

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# FOREIGN AGRICULTURE CIRCULAR

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## INTERNATIONAL TRADE IN DAIRY PRODUCTS INCREASES IN 1950

International trade in dairy products in 1950 was well above that of 1949 and of prewar levels in selected countries. The combined weight of exports of butter, cheese, canned and dried milk in 1950 was 2 percent greater than that of 1949 and 33 percent greater than prewar levels. The milk equivalent of these exports in 1950 was 8 percent more than that of 1949 and 3 percent more than that of prewar. These changes in both product weight and milk equivalent of dairy products trade reflect changes not only in the amount of trade but also in the relative importance of the individual products as compared to prewar levels.

Butter accounts for relatively less of the dairy products trade while cheese, canned and dried milk are all relatively much more important. Exports of butter in 1950, although 13 percent more than those of 1949, were 8 percent lower than prewar levels. Cheese exports were 3 percent more than those of 1949 and 30 percent above prewar levels. Canned milk trade, although 7 percent less than in 1949, was 50 percent greater than that of prewar. The greatest changes, however, in international dairy trade took place in the exports of dried milk and especially in nonfat dry milk 1/. Exports of dry whole milk were 5 percent less than in 1949 but were more than 3 times greater than prewar. Nonfat dry milk trade was 6 percent less than in 1949 but more than 15 times greater than prewar levels.

The changes in the relative importance in international trade of the individual dairy products as compared to prewar levels are a result of changes in milk production, utilization and consumption in many countries. Total milk production is above prewar levels in nearly all countries from which reports have been received. This increased production is being used in both increased domestic consumption and increased trade. The change in the utilization of milk going into trade reflects the trend of increased use of whole milk solids. The increased trade, largely in cheese, canned

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1/ An extensive statement, relating to Dairy Products Trade in Western Hemisphere Countries, will soon be available upon request to the Office of Foreign Agricultural Relations, U. S. Department of Agriculture, Washington 25, D. C.

and dried milk, is due in part to the establishment of new markets. These new markets are the result of the war-time introduction of dairy products to new and widespread areas of the world, postwar use of these products in emergency food programs, increased purchasing power of consumers, and commercial development throughout the world. In many primary raw material producing regions, commercial developments have caused concentrations of population in flourishing trade centers which are not adequately supplied with dairy products and other food by local producers. Milk and dairy products have become quite important in the food importations of these trade centers. Increased recognition of nutritive values, palatability, ease of use, and relatively long storage-life, especially of dried milk, have been factors in the inclusion of milk in food importations.--By L. M. Smith, Jr., based in part upon U. S. Foreign Service reports.

DAIRY PRODUCTS: Exports of butter, cheese, canned and dried milk in product weight and whole milk equivalent from selected countries, average 1934-38 and annual 1949 and 1950, preliminary 1/.

| | Average 1934-38 | | 1949 | | 1950 | |
|---|---|---|---|---|---|---|
| | Product Weight | Whole Milk Equivalent | Product Weight | Whole Milk Equivalent | Product Weight | Whole Milk Equivalent |
| | | | Million Pounds | | | |
| Butter ............. | 1,133 | 24,813 | 920 | 20,148 | 1,039 | 22,754 |
| Cheese ............. | 592 | 5,400 | 748 | 6,807 | 767 | 6,980 |
| Canned Milk.......... | 540 | 1,188 | 869 | 1,912 | 808 | 1,778 |
| Dried whole milk ... | 50 | 426 | 166 | 1,411 | 157 | 1,335 |
| Nonfat dry milk .... | 21 | -- | 341 | -- | 332 | -- |
| Aggregate weights | 2,336 | 31,827 | 3,044 | 30,278 | 3,103 | 32,847 |

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1/ Countries are Canada, United States, Argentina, Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, Australia, and New Zealand.

(See accompanying tables on following pages)

## BUTTER: International Trade, Average 1934-38, Annual 1949 and 1950, Preliminary

| Country | Average 1934-38 | | 1949 | | 1950 | |
|---|---|---|---|---|---|---|
| | Exports | Imports | Exports | Imports | Exports | Imports |
| | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. |
| NORTH AMERICA | | | | | | |
| Canada | 1/ 5,640 | 1/ 110 | 1,069 | 1,123 | 1,629 | 6 |
| Mexico | 2/ | 1/ 181 | -- | 3/ | -- | 3/ |
| United States | 1,152 | 9,307 | 4,174 | 271 | 3,215 | 10 |
| Cuba | 4/ 610 | 4/ 23 | -- | 667 | -- | 1,658 |
| SOUTH AMERICA | | | | | | |
| Argentina | 5/ 18,823 | 5/ 64 | 2/ | -- | 20 | -- |
| Peru | 2/ | 311 | -- | 91 | -- | 6/ 1,300 |
| Venezuela | -- | 798 | -- | 2,191 | -- | 6/ 7,700 |
| EUROPE | | | | | | |
| Austria | 5,980 | 73 | 2/ | 7 | 1 | 1,102 |
| Belgium and Luxembourg | 68 | 9,930 | 2,024 | 56,427 | 6/ 37 | 6/44,055 |
| Czechoslovakia | 754 | 1,918 | 7/ | 7/ | 7/ | 7/ |
| Denmark | 328,573 | 37 | 302,903 | -- | 338,175 | -- |
| Estonia | 26,378 | -- | 8/ | 8/ | 8/ | 8/ |
| Finland | 9/ 24,467 | 9/ 15 | 23 | 3,060 | 3/ | 3/ |
| France | 8,952 | 3,640 | 6,989 | 57,816 | 3,907 | 41,396 |
| Germany, Western | 7/ | 7/ | -- | 6,597 | 224 | 100,661 |
| Greece | 2/ | 360 | -- | 324 | -- | 57 |
| Hungary | 9,118 | -- | 7/ | 7/ | 7/ | 7/ |
| Ireland | 51,843 | 448 | 1,412 | -- | 6,901 | -- |
| Italy | 1,067 | 2,152 | 117 | 12,452 | 198 | 9,295 |
| Latvia | 40,774 | -- | 8/ | 8/ | 8/ | 8/ |
| Lithuania | 30,390 | -- | 8/ | 8/ | 8/ | 8/ |
| Netherlands | 109,587 | 356 | 117,809 | 44 | 142,477 | 18 |
| Norway | 725 | 2 | 1,374 | -- | 9,512 | -- |
| Poland and Danzig | 18,664 | 2 | 7/ | 7/ | 7/ | 7/ |
| Portugal | 141 | 229 | 415 | 487 | 626 | 441 |
| Sweden | 50,547 | 353 | 3,567 | 9 | 31,678 | -- |
| Switzerland | 7 | 2,033 | 55 | 24,083 | 4 | 20,708 |
| United Kingdom | 1,367 | 1,074,727 | -- | 712,264 | -- | 751,054 |
| USSR (Eur.&Asia) | 46,486 | 401 | 7/ | 7/ | 7/ | 7/ |
| OCEANIA | | | | | | |
| Australia | 220,151 | 2 | 150,282 | -- | 175,910 | -- |
| New Zealand | 308,395 | 2 | 330,624 | -- | 6/325,000 | -- |
| OTHERS | | | | | | |
| British Malaya | 10/ 571 | 10/ 4,078 | -- | 6/ 2,200 | -- | -- |
| India | 10/ 4,142 | 10/ 6,175 | 7/ | -- | -- | -- |
| Indonesia | -- | 10/12,352 | -- | 6/ 800 | -- | -- |
| Palestine | -- | 4,826 | -- | -- | -- | -- |
| Rep. of Philippines | -- | 1,566 | -- | 2,066 | -- | 1,161 |
| Southern Rhodesia | 11/ 253 | 11/ 563 | 63 | 1,368 | -- | -- |

See footnotes at end of last table.

### CHEESE: International Trade, Average 1934-38
### Annual 1949 and 1950, Preliminary

| Country | Average 1934-38 | | 1949 | | 1950 | |
|---|---|---|---|---|---|---|
| | Exports | Imports | Exports | Imports | Exports | Imports |
| | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. |
| NORTH AMERICA | | | | | | |
| Canada | 73,744 | 1,251 | 52,695 | 2,360 | 63,110 | 10,160 |
| Mexico | 15 | 895 | 3/ | 3/ | 3/ | 3/ |
| United States | 1,260 | 54,279 | 98,021 | 32,014 | 47,493 | 56,189 |
| Cuba | 13 | 428 | 9 | 719 | -- | 1,647 |
| SOUTH AMERICA | | | | | | |
| Argentina | 3,406 | 110 | 22,145 | -- | 13,534 | -- |
| Peru | -- | 688 | -- | 124 | -- | 6/ 641 |
| Venezuela | 13 | 1,235 | -- | 6,344 | -- | 6/ 8,090 |
| EUROPE | | | | | | |
| Austria | 6,720 | 1,818 | 2 | 3,027 | 1,552 | 1,596 |
| Belgium and Luxembourg | 344 | 50,563 | 2,097 | 63,510 | 6/ 359 | 6/ 65,779 |
| Czechoslovakia | 1,909 | 2,706 | 7/ | 7/ | 7/ | 7/ |
| Denmark | 18,067 | 33 | 66,772 | 28 | 87,000 | 67 |
| Estonia | 324 | 2 | 8/ | 8/ | 8/ | 8/ |
| Finland | 11,651 | 31 | 9,065 | -- | 3/ | 3/ |
| France | 25,039 | 30,867 | 36,360 | 30,311 | 36,513 | 51,603 |
| Germany (Western) | 7/ | 7/ | -- | 49,294 | 4,940 | 96,214 |
| Greece | 621 | 800 | -- | 7,061 | -- | 12,266 |
| Hungary | 862 | 15 | 7/ | 7/ | 7/ | 7/ |
| Ireland | 1,509 | 60 | 2,888 | 75 | 985 | 133 |
| Italy | 53,224 | 9,672 | 29,015 | 15,267 | 40,857 | 13,655 |
| Latvia | 132 | -- | 8/ | 8/ | 8/ | 8/ |
| Lithuania | 1,318 | 2 | 8/ | 8/ | 8/ | 8/ |
| Netherlands | 132,358 | 934 | 136,729 | 520 | 154,027 | 534 |
| Norway | 4,111 | 338 | 1,125 | 655 | 1,859 | 208 |
| Poland and Danzig | 1,360 | 317 | 7/ | 7/ | 7/ | 7/ |
| Portugal | 143 | 386 | 553 | 1 | 722 | 13 |
| Rumania | 139 | 90 | -- | -- | 7/ | -- |
| Spain | 12/ 117 | 12/ 2,502 | 7/ | 7/ | 7/ | 7/ |
| Sweden | 625 | 2,473 | 6,232 | 7,778 | 14,407 | 2,930 |
| Switzerland | 41,678 | 3,924 | 27,735 | 2,690 | 32,916 | 4,083 |
| United Kingdom | 2,987 | 319,028 | -- | 477,054 | -- | 344,993 |
| USSR(Eur.&Asia) | 84 | 816 | 7/ | 7/ | 7/ | 7/ |
| OCEANIA | | | | | | |
| Australia | 21,750 | 104 | 48,489 | 74 | 49,831 | 147 |
| New Zealand | 194,000 | 2 | 208,843 | -- | 222,695 | -- |
| OTHERS | | | | | | |
| Algeria | 82 | 10,833 | -- | 1/ 15,000 | -- | -- |
| Egypt | 13/5/ 82 | 15/ 5/ 7,273 | -- | 6/ 4,700 | -- | -- |
| India | 4 | 1,204 | 7/ | 6/ 1,200 | -- | -- |
| Rep.of Philippines | -- | 895 | -- | 2,376 | -- | 958 |
| Syria & Lebanon | 553 | 917 | 7/ | 7/ | -- | -- |

See footnotes at end of last table.

## CANNED MILK: International Trade, Average 1934-38, Annual 1949 and 1950, Preliminary

| Country | Average 1934-38 |  | 1949 |  | 1950 |  |
|---|---|---|---|---|---|---|
|  | Exports | Imports | Exports | Imports | Exports | Imports |
|  | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs |
| NORTH AMERICA |  |  |  |  |  |  |
| Canada | 22,958 | 22 | 36,534 | 6 | 37,460 | 15 |
| Guatemala | -- | 7/ | -- | 410 | -- | 7/ |
| Mexico | -- | 14/ 614 | -- | 6/ 4,000 | --- | -- |
| Panama | -- | 4,327 | -- | -- | -- | -- |
| Panama Canal Zone | -- | 2,543 | -- | -- | -- | -- |
| United States | 33,337 | 452 | 327,858 | 29 | 178,044 | 369 |
| Cuba | -- | 4,691 | -- | 32,912 | -- | 30,918 |
| Netherlands Antilles | -- | 3,059 | -- | 5,000 | -- | -- |
| SOUTH AMERICA |  |  |  |  |  |  |
| Argentina | 46 | 311 | 7/ | 7/ | 7/ | 7/ |
| Peru | -- | 7,833 | -- | 18,596 | -- | 6/15,000 |
| EUROPE |  |  |  |  |  |  |
| Austria | 7/ | 7/ | 8 | 396 | 2 | 1,220 |
| Belgium | 2,203 | 15/ 600 | 542 | 53,790 | 6/ 260 | 6/74,500 |
| Czechoslovakia | -- | 15/ 307 | -- | 7/ | 7/ | 7/ |
| Denmark | 40,439 | -- | 85,814 | -- | 86,825 | -- |
| Finland | 7/ | 7/ | 16/ 289 | 16/ 724 | 7/ | 7/ |
| France | 16/11,277 | 2,955 | 24,048 | 10,983 | 26,400 | 4,043 |
| Germany, Western | 7/ | 7/ | -- | 16/17/66,246 | 272 | 8,882 |
| Greece | -- | 4,309 | -- | 66,730 | -- | 64,293 |
| Ireland | 5/ 12,936 | 5/ 60 | 27,505 | -- | 18,589 | -- |
| Italy | 3,301 | 344 | 2,302 | 32,906 | 56 | 24,368 |
| Netherlands | 356,087 | 77 | 255,077 | 161 | 336,750 | 148 |
| Norway | 4,666 | 67 | 131 | -- | 108 | 10 |
| Portugal | -- | 15/16/ 31 | 16 | 16/ 41 | 93 | 16/ 11 |
| Spain | 14/ 26 | 14/ 28 | -- | -- | -- | -- |
| Sweden | 15/ 115 | 15/ 18 | 4,270 | 2,663 | -- | 2 |
| Switzerland | 12,986 | 9 | 7,629 | 193 | 4,696 | 1,403 |
| United Kingdom | 36,002 | 199,204 | 11,742 | 121,449 | 19,622 | 34,501 |
| OCEANIA |  |  |  |  |  |  |
| Australia | 15,392 | 4 | 65,619 | 2 | 75,150 | 2/ |
| New Zealand | 6,156 | -- | 24,101 | -- | 24,284 | -- |
| OTHERS |  |  |  |  |  |  |
| British Malaya | 8,963 | 73,682 | - | 6/ 70,000 | -- | -- |
| Hong Kong | 7/ | 7/ | -- | 21,265 | -- | -- |
| India | -- | 18/ 8,620 | -- | 8,545 | -- | -- |
| Indonesia | -- | 32,390 | -- | 55,830 | -- | -- |
| Rep. of Philippines | -- | 40,643 | -- | 121,821 | -- | 100,512 |

See footnotes at end of last table

## DRIED MILK:19/ International Trade, Average 1934-38, Annual 1949 and 1950, Preliminary

| Country | Average 1934-38 | | 1949 | | 1950 | |
|---|---|---|---|---|---|---|
| | Exports | Imports | Exports | Imports | Exports | Imports |
| | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. |
| NORTH AMERICA | | | | | | |
| Canada | 4,865 | 418 | 35,435 | 1,055 | 18,305 | 850 |
| Mexico | -- | 466 | -- | 8,856 | -- | 3/ |
| United States | 4,804 | 6,020 | 295,059 | 5,254 | 292,000 | 2,526 |
| Cuba | 7/ | 7/ | -- | 2,280 | -- | 3,120 |
| SOUTH AMERICA | | | | | | |
| Argentina | 170 | -- | 701 | -- | 214 | -- |
| Peru | -- | 7/ | -- | 1,547 | -- | 1,460 |
| Venezuela | 7/ | 7/ | 7/ | 40,000 | -- | 7/ |
| EUROPE | | | | | | |
| Austria | 7/ | 7/ | -- | 3,746 | -- | 2,256 |
| Belgium | -- | 5,669 | 1,510 | 10,661 | -- | 13,779 |
| Czechoslovakia | -- | 154 | -- | 6/ 6,000 | 7/ | 7/ |
| Denmark | 594 | -- | 16,933 | -- | 19,679 | -- |
| France | -- | 2,168 | 1,991 | 25,115 | 1,962 | 9,273 |
| Germany | 7/ | 7/ | -- | 7/ | 19,854 | 8,057 |
| Greece | -- | 209 | -- | 25,818 | -- | 27,969 |
| Ireland | 626 | 213 | 3,234 | 382 | 5,853 | 1,007 |
| Italy | 25 | 2 | -- | 23,201 | 7/ | 7/ |
| Netherlands | 37,151 | 122 | 55,860 | 860 | 37,280 | 6,885 |
| Norway | 10 | 90 | 38 | 56 | 25 | 20 |
| Spain | 14 | 374 | 7/ | 7/ | 7/ | 7/ |
| Sweden | 1,451 | 117 | 11,499 | -- | 15,320 | -- |
| Switzerland | 3,036 | 7 | 2,372 | 3,477 | 4,694 | 4,641 |
| United Kingdom | -- | 30,879 | -- | 99,057 | -- | 84,890 |
| OCEANIA | | | | | | |
| Australia | 3,324 | 239 | 36,910 | 123 | 6/ 37,289 | 7/ |
| New Zealand | 16,111 | -- | 52,932 | -- | 66,701 | -- |
| OTHERS | | | | | | |
| India | -- | 1,525 | -- | 11/ 11,808 | -- | 11/19,179 |
| Japan | 613 | 700 | -- | 51,879 | -- | 48,369 |
| Rep. of Philippines | -- | 735 | -- | 4,067 | -- | 5,888 |

1/ Average for years 1935-37. 2/ Less than 500 pounds. 3/ Incomplete. 4/ Average for years 1936-38. 5/ Average for years 1934-37. 6/ Unofficial estimate. 7/ Not available. 8/ Incorporated in U.S.S.R. on August 3, 1940. 9/ For the year 1934 only. 10/ Includes ghee. 11/ For fiscal year beginning April 1. 12/ Average for years 1934 and 1935. 13/ Including Trade with Anglo-Egyptian Sudan. 14/ For the years 1935 only. 15/ For the year 1938 only. 16/ Includes Dried Milk. 17/ Bi-zone only. 18/ Average for 1937-39. 19/ Includes dried skim milk.

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# FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD-5-51 May 21, 1951

## MILK PRODUCTION AND UTILIZATION IN PRINCIPAL PRODUCING COUNTRIES IN 1950

Milk production in practically every major producing country except Australia was greater in 1950 than in 1949. Cow numbers increased in nearly all countries except Canada, Norway and Sweden. Feed supplies, both grain and roughage, were adequate and milk prices were generally favorable. Much of the increased milk supplies of 1950 was utilized as fresh and canned milk whereas in 1949 most of the increased production went into butter and cheese.

Fluid milk consumption increased in nearly all major producing countries except Belgium, the Netherlands, and Switzerland. Butter production increased in nearly all countries except Canada and the United States. Cheese production decreased in Canada and the United States, was about the same in Denmark, the Netherlands, and Australia, and increased in the other countries. Canned milk production increased in all major producing countries with major increases occurring in the Netherlands, Denmark and the United Kingdom.

Trade in dairy products, especially canned milk, increased considerably. Exports of Dutch dairy produce in 1950 showed increases over 1949 for butter, cheese and condensed milk and a reduction in shipments of milk powder. Exports of butter from Ireland were much heavier in 1950 than in 1949, but at the end of the year stocks declined and imports were necessary. Denmark increased its butter exports in 1950 over 1949. Australian butter exports were much lower in 1950 than in 1949, but New Zealand continued as a large exporter of butter and cheese. Exports of dairy products from the United States decreased very sharply, especially for cheese and condensed milk. The United Kingdom and Western Germany continued to be the largest importers of dairy produce in 1950 as in 1949.

It is expected that milk cow numbers and milk production in the major producing countries in 1951 will be about the same as in 1950. The severe winter of 1950-51 depleted stocks of grain and roughage and increased feed prices. Unless weather conditions are above average, grain supplies may decline further in 1951-52. While it is expected that milk prices will rise in 1951, this is not expected to offset the higher feed prices. Consequently, milk production for the current year probably will remain at about the 1950 level.

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This is one of a series of regularly scheduled reports on world agricultural production approved by the Office of Foreign Agricultural Relations Committee on Foreign Crop and Livestock Statistics. It is based in part upon U. S. Foreign Service reports.

MILK: Production and utilization in specified countries, 1950 (preliminary) and 1949

| Country | Production |  |  | Utilization 1/ |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  | Milk cows 2/ | Production per cow | Milk production | Fluid milk 3/ | Butter | Cheese | Canned milk | Other uses 4/ | Feed |
|  | 1,000 head | Pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds |
| 1950 |  |  |  |  |  |  |  |  |  |
| Canada | 3,609 | 4,554 | 16,437 | 5,852 | 7,228 | 1,148 | 597 | 559 | 1,053 |
| United States | 22,779 | 5,292 5/ | 123,381 | 58,450 | 33,345 | 11,680 | 6,940 | 9,584 | 3,382 |
| Austria | 1,170 | 3,674 | 4,299 | 2,055 | 1,267 | 287 | - | 2 | 688 |
| Belgium | 950 | 7,309 | 6,944 | 1,951 | 3,968 | 132 | 20 | 8 | 865 |
| Denmark | 1,577 | 7,566 | 11,931 | 1,592 | 8,578 | 913 | 291 | 48 | 509 |
| France | 8,400 | 4,057 | 34,079 | 8,770 | 11,905 | 5,680 | - 6/ | 454 7/ | 7,270 |
| Netherlands | 1,521 | 8,385 | 12,754 | 3,433 | 5,125 | 2,468 | 834 | 228 | 666 |
| Norway | 766 | 4,678 | 3,582 | 1,656 | 1,080 | 551 | - 6/ | 75 | 220 |
| Sweden | 1,664 | 6,482 | 10,798 | 3,763 | 5,346 | 1,012 | - 6/ | 126 | 551 |
| Switzerland 8/ | 858 | 6,349 | 5,534 | 2,359 | 794 | 1,422 | - 6/ | 99 | 860 |
| United Kingdom | 3,765 | 6,136 | 23,103 | 17,582 | 1,380 | 1,298 | 762 | 526 | 1,555 |
| Australia | 2,354 | 5,508 9/ | 12,966 | 2,625 | 8,449 | 1,034 | 317 | 541 | - |
| New Zealand 10/ | 1,850 | 5,623 | 10,403 | 937 | 6,767 | 2,112 | - 6/ | 309 | 278 |
| 1949 |  |  |  |  |  |  |  |  |  |
| Canada | 3,620 | 4,653 | 16,843 | 5,744 | 7,794 | 1,323 | 561 | 580 | 841 |
| United States | 22,745 | 5,243 11/ | 122,071 | 57,385 | 33,890 | 11,958 | 6,726 | 8,901 | 3,211 |
| Austria | 1,104 | 3,695 | 4,079 | 1,860 | 1,375 | 192 | - | 2 | 650 |
| Belgium | 900 | 7,573 | 6,816 | 2,109 | 3,655 | 132 | 7 | 12 | 901 |
| Denmark | 1,535 | 7,029 | 10,789 | 1,568 | 7,557 | 915 | 196 | 57 | 496 |
| France | 8,150 | 3,763 | 30,671 | 8,414 | 10,629 | 4,039 | - 6/ | 319 7/ | 7,270 |
| Netherlands | 1,484 | 7,823 | 11,610 | 3,697 | 4,625 | 2,425 | 57 | 220 | 586 |
| Norway | 769 | 4,443 | 3,417 | 1,645 | 981 | 441 | - 6/ | 75 | 275 |
| Sweden | 1,677 | 6,107 | 10,245 | 3,715 | 4,894 | 930 | - 6/ | 232 | 474 |
| Switzerland 8/ | 839 | 6,261 | 5,382 | 2,417 | 712 | 1,323 | - 6/ | 92 | 838 |
| United Kingdom | 3,690 | 5,830 | 21,506 | 17,129 | 1,081 | 824 | 494 | 464 | 1,514 |
| Australia | 2,340 | 5,542 9/ | 12,968 | 2,581 | 8,446 | 1,012 | 295 | 634 | - |
| New Zealand 10/ | 1,747 | 5,801 | 10,135 | 855 | 6,695 | 2,008 | - 6/ | 299 | 278 |

1/ Includes farm uses. 2/ Includes, for the United States and Canada, cows kept mainly for milk, and for all other countries, cows producing over and above the requirements of the calf. 3/ Includes milk used for cream. 4/ Includes milk used for ice-cream, dried whole milk, minor products, waste and balance. 5/ Total production is shown. Production on farms, - 120,555 million pounds. 6/ Includes canned milk. 7/ Includes both hand-fed milk and milk sucked by calves. 8/ Production and utilization include goats' milk. 9/ Excludes milk fed to calves. 10/ Year ending June 30. 11/ Total production is shown. Production on farms, - 119,245 million pounds

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service reports, and other information.

MILK: Production and utilization in specified countries, 1934-38

| Country | Production | | | Utilization 1/ | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Milk cows 2/ | Production per cow | Milk production | Fluid milk 3/ | Butter | Cheese | Canned milk | Other uses 4/ | Feed |
| | 1,000 head | Pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds |
| Canada | 3,816 | 4,138 | 15,789 | 4,645 | 8,197 | 1,411 | 273 | 472 | 791 |
| United States | 23,933 | 4,291 5/ | 105,416 | 43,559 | 43,729 | 6,449 | 4,607 | 4,333 | 2,739 |
| Austria 6/ | 1,210 | 4,630 | 5,602 | 3,068 | 1,212 | 661 | - | - | 661 |
| Belgium | 967 | 7,022 | 6,790 | 1,433 | 4,321 | 163 | 15 | 42 | 816 |
| Denmark | 1,658 | 7,047 7/ | 11,684 | 1,433 | 9,314 | 331 | - 8/ | 55 | 551 |
| Finland | 1,309 | 4,268 | 5,587 | 2,556 | 2,735 | 205 | - | - | 91 |
| France | 8,400 | 3,929 | 33,000 | 8,000 | 12,325 | 5,000 | - 8/ | 175 9/ | 7,500 |
| Germany | 10,076 | 5,270 7/ | 53,100 | 16,100 | 28,100 | 2,400 | - | 500 | 6,000 |
| Italy | 3,466 | 3,968 10/ | 13,750 | 3,700 | 2,700 | 3,600 | 24 | 626 | 3,100 |
| Netherlands | 1,460 | 7,658 | 11,180 | 2,321 | 5,536 | 2,291 | - 8/ | 520 | 512 |
| Norway | 807 | 3,660 7/ | 2,954 | 1,124 | 1,111 | 489 | - 8/ | 53 | 177 |
| Sweden | 1,922 | 5,327 7/ | 10,238 | 3,283 | 5,170 | 782 | - 8/ | 44 | 959 |
| Switzerland 11/ | 902 | 6,297 7/ | 6,041 | 2,125 | 1,497 | 1,303 | - 8/ | 49 | 1,067 |
| United Kingdom | 3,300 | 5,583 | 18,424 | 11,100 | 2,800 | 1,008 | 647 | 686 | 2,183 |
| Australia 12/ | 2,545 | 4,629 13/ | 11,780 | 1,612 | 9,466 | 444 14/ | 258 | - | - |
| New Zealand 12/ | 1,787 | 5,694 | 10,176 | 669 | 7,066 | 1,967 | - 8/ | 247 | 227 |

1/ Includes farm uses. 2/ Includes, for the United States and Canada, cows kept mainly for milk, and for all other countries, cows producing over and above the requirements of the calf. 3/ Includes milk used for cream. 4/ Includes milk used for ice cream, dried whole milk, minor products, waste and balance. 5/ Total production is shown. Milk production on farms, - 102,590 million pounds. 6/ For the year 1934. 7/ For the years 1933-1937. 8/ Includes canned milk. 9/ Includes both hand-fed milk and milk sucked by calves. 10/ For the year 1938. 11/ Production and utilization include goats' milk. 12/ For the years ending June 30. 13/ Excludes milk fed to calves. 14/ Includes dried whole milk.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service reports, and other information.- May 21, 1951.

FOREIGN AGRICULTURE CIRCULAR

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OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD-4-51 June 4, 1951

# WORLD BUTTER AND CHEESE OUTPUT INCREASED DURING 1950

Total butter and cheese output in principal producing countries increased considerably in 1950 over 1949. Milk production in practically every major producing country was greater in 1950 than in the preceding year. Thus, despite generally increased fluid milk consumption and increased output of canned milk, larger quantities of milk were generally available for use in butter and cheese.

Although some countries have been gradually relaxing regulations concerning the production and marketing of butter and cheese, a few countries still had in 1950 quite rigid controls and many had various price, subsidy, tax and licensing programs which affected both domestic production and international trade of butter and cheese.

World production of butter, including ghee produced in Middle Eastern and Far Eastern countries, is estimated at about 8,000 million pounds for 1950 as compared with estimated production for 1949 of about 7,800 million pounds. Production of butter, excluding ghee, in the major producing countries is reported at 5,590 million pounds in 1950 as compared to 5,370 million pounds in 1949. Butter production in the major producing countries is now at 89 percent of prewar levels.

Although total butter production is reported to have increased about 4 percent, output decreased in 4 of the major producing countries in 1950. In the United States, output was 2 percent lower than in 1949 and only 76 percent of prewar. In Canada, output was down 7 percent from 1949 and was 90 percent of prewar. In New Zealand, output, although down from 1949, was 2 percent above prewar. These decreases, however, were more than offset by major increases which took place in 1950 output of butter in Denmark, France and Western Germany and smaller increases in Belgium, the Netherlands, Sweden and Argentina. Increases also took place in Finland, the Union of South Africa, the United Kingdom, Switzerland, Ireland, and Italy. Of these countries reporting increased output over 1949, only Argentina, the Union of South Africa, Sweden and Belgium were above prewar levels.

Production of cheese in reporting countries in 1950 increased about 7 percent over 1949 and was about 30 percent above prewar levels. This relatively large increase in cheese output is reflected in changes in the utilization pattern of total milk production wherein cheese accounts for a larger, and butter a smaller, proportion of the world milk supply. However, cheese output in 1950 decreased from 1949 levels in 4 major countries. In Canada, output was down 17 percent from 1949 and down 20 percent from prewar. In the United States, the major producer of cheese as well as butter, output in 1950 was down 2 percent from 1949 but up 82 percent over prewar. In Sweden, output was down 21 percent from 1949 but 13 percent above prewar. In Denmark, output was down 4 percent from 1949 but nearly 90 percent above prewar. In nearly all other countries reporting, output was above both 1949 and prewar levels. Major increases took place in France, Italy and the United Kingdom, with smaller increases in Greece, Austria, Norway, Argentina and Finland.

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BUTTER: Preliminary estimate of production in specified countries in 1950, with comparisons

| Continent and country | | Average 1934-38 | | | | 1949 | | | | 1950 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Factory | | Total | | Factory | | Total | | Factory | | Total |
| | | Million pounds | | Million pounds | | Million pounds | | Million pounds | | Million pounds | | Million pounds |
| NORTH AMERICA | | | | | | | | | | | | |
| Canada | 1/ | 252 | 1/ | 348 | | 280 | | 335 | | 262 | | 311 |
| United States | | 1,673 | | 2,178 | | 1,412 | | 1,694 | | 1,395 | | 1,666 |
| Cuba | 1/ | 4 | 1/ | 4 | | 3 | | 3 | | 3 | | 3 |
| EUROPE | | | | | | | | | | | | |
| Austria | | - | 2/3/ | 51 | | - | 3/ | 55 | | - | 3/ | 51 |
| Belgium | 4/ | 46 | 4/ | 156 | | - | | 143 | | - | | 165 |
| Czechoslovakia | 5/6/ | 27 | | - | 6/ | 71 | | - | | - | | - |
| Denmark | | 401 | | 401 | | 344 | | 344 | | 396 | | 396 |
| Finland | 7/ | 69 | 3/7/ | 121 | | 53 | | 77 | 3/ | 62 | 3/ | 86 |
| France | 3/ | 220 | 3/ | 529 | | - | 3/ | 460 | | - | 3/ | 510 |
| Germany, Western | 1/ | 560 | 1/ | 681 | | 523 | 3/ | 536 | | 571 | 3/ | 584 |
| Greece 8/ | | - | | 13 | | - | | 10 | | - | | 12 |
| Ireland | | 89 | | 149 | | 77 | 3/ | 121 | | 83 | 3/ | 127 |
| Italy | | - | | 111 | | - | | 117 | | - | 3/ | 122 |
| Luxembourg | | 6 | | 6 | | 7 | | 7 | 3/ | 7 | 3/ | 7 |
| Netherlands | 9/ | 230 | 9/ | 239 | | 185 | | 185 | | 205 | | 205 |
| Norway | | 24 | | 51 | | 24 | | 40 | | 26 | | 44 |
| Sweden | | 153 | | 190 | | 216 | | 223 | | 240 | | 245 |
| Switzerland 10/ | | - | | 58 | | - | | 34 | | - | | 41 |
| United Kingdom | 9/ | 47 | 9/ | 101 | | 24 | 3/ | 46 | | 36 | 3/ | 58 |
| SOUTH AMERICA | | | | | | | | | | | | |
| Argentina | | 66 | | - | 3/ | 86 | | - | 3/ | 112 | | - |
| Brazil | 4/ | 51 | 4/ | 72 | | - | | - | | - | | - |
| AFRICA | | | | | | | | | | | | |
| Union of South Africa | 11/ | 28 | 11/ | 41 | | 46 | 3/ | 58 | | 60 | 3/ | 72 |
| OCEANIA | | | | | | | | | | | | |
| Australia | 12/ | 415 | 12/ | 437 | | 378 | 3/ | 389 | | 379 | 3/ | 390 |
| New Zealand | 12/13/ | 358 | 12/13/ | 376 | | 394 | 3/ | 407 | | 372 | 3/ | 385 |
| Estimated world total 14/ | | - | | 9,600 | | - | | 7,800 | | - | | 8,000 |

1/ Averages for years 1935-38. 2/ Averages for years 1934-37. 3/ Estimated. 4/ Averages for years 1936-38. 5/ Averages for years 1933-36. 6/ Includes farm butter delivered to creameries. 7/ Averages for years 1936-39. 8/ Made from the milk of cattle, buffaloes, sheep and goats. 9/ For the year 1939. 10/ Made from the milk of cattle and goats.
11/ Production year beginning September 1. 12/ Production year beginning July 1. 13/ One year, 1937-38 only.
14/ Includes product weight of ghee in those countries where ghee production is common, especially India, Turkey, Egypt and other Middle and Far Eastern countries.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States Foreign Service reports, and other information.-June 4, 1951.

## CHEESE: Preliminary estimate of production in specified countries in 1950, with comparisons

| Continent and country | Average 1934-38 |  | 1949 |  | 1950 |  |
|---|---|---|---|---|---|---|
|  | Factory | Total | Factory | Total | Factory | Total |
|  | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds | Million pounds |
| NORTH AMERICA |  |  |  |  |  |  |
| Canada | 1/ 125 | 1/ 126 | 121 | 122 | 100 | 101 |
| United States | 643 | 643 | 1,200 | 1,200 | 1,173 | 1,173 |
| Cuba | 2/ 3 | 2/ 6 | 5 | 3/ 10 | 5 | 3/ 10 |
| EUROPE |  |  |  |  |  |  |
| Austria | - | 4/ 69 | 17 | 3/ 19 | 21 | 3/ 29 |
| Belgium | - | 4/ 17 | 10 | 3/ 13 | 12 | 3/ 13 |
| Czechoslovakia | 5/ 55 | - | 31 | - | - | - |
| Denmark | 69 | 69 | 136 | 136 | 130 | 130 |
| Finland | 6/ 23 | - | 20 | - | 28 | - |
| France 7/ | 2/ 365 | 3/ 584 | - | 3/ 470 | - | 3/ 660 |
| Greece 8/ | - | 129 | - | 83 | - | 95 |
| Ireland | - | 9/ 4 | - | 7 | - | 7 |
| Italy 7/ | - | 524 | - | 522 | - | 3/ 575 |
| Luxembourg | - | 1 | - | 3/ 1 | - | 3/ 1 |
| Netherlands | 3/ 200 | 267 | 238 | 282 | 236 | 287 |
| Norway 10/ | 40 | 3/ 50 | 47 | 47 | 57 | 57 |
| Sweden | 76 | 3/ 88 | 146 | 146 | 115 | 115 |
| Switzerland 10/ | - | 112 | - | 119 | - | 124 |
| United Kingdom 11/ | 81 | 109 | 69 | 74 | 118 | 123 |
| SOUTH AMERICA |  |  |  |  |  |  |
| Argentina | 68 | - | 3/ 218 | - | 3/ 227 | - |
| Brazil | 9/ 59 | 9/ 92 | - | - | - | - |
| Uruguay | - | 2/ 11 | - | 3/ 20 | - | 3/ 13 |
| AFRICA |  |  |  |  |  |  |
| Union of South Africa | 12/ 10 | 12/ 11 | - | 17 | - | 21 |
| OCEANIA |  |  |  |  |  |  |
| Australia | 12/ 48 | 13/ 49 | 101 | 3/ 102 | 104 | 3/ 105 |
| New Zealand | 13/ 211 | 13/ 211 | 234 | 234 | 240 | 240 |

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1/ Year 1939 only. 2/ Year 1937 only. 3/ Estimated. 4/ Averages for years 1934-37. 5/ Averages for years 1933-36. 6/ Averages for years 1936-39. 7/ Made from the milk of cattle, sheep and goats. 8/ Made from the milk of cattle, buffaloes, sheep and goats. 9/ Averages for years 1936-38. 10/ Made from the milk of cattle and goats. 11/ Excludes the output of producers outside the Milk Marketing Scheme. 12/ Production year beginning September 1. 13/ Production year beginning July 1.

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FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
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FD 2-51 July 2, 1951

# WORLD OUTPUT OF DAIRY PRODUCTS, FIRST QUARTER, 1951

Over-all factory production of dairy products in the major producing countries decreased slightly in the first quarter of 1951, as compared with the same quarter of 1950. Unfavorable weather in many of the important dairy countries caused a serious decline in milk production, thus curtailing the quantity of milk available for utilization in manufacture. The necessity of meeting demands for relatively high levels of fluid milk consumption was also a factor in limiting manufacturing supplies.

Conditions for milk production in the Southern Hemisphere were variable. In New Zealand, adequate warm rains throughout January and February promoted pasture growth, and dairy factory receipts of butterfat were at a new high level. Although very dry conditions were experienced in some major producing areas in March, and growth was practically at a standstill, factory butterfat production continued appreciably above the preceding year. Dairy stock in Australia in the first quarter were in good condition generally, but the very hot and dry weather which prevailed in the important dairy districts caused a decline in milk production below the output for the corresponding quarter a year ago.

In Denmark, weather conditions in the first quarter were, on the whole, satisfactory for pasture growth, rainfall being considerably above average. Milk production for this period showed a slight gain over comparable 1950. Deliveries to plants in Switzerland were higher in the opening quarter, due to larger cow numbers and to some increase in yield per cow, and also to the fact that less milk was consumed on farms. In Western Germany, where better breeding and feeding resulted in increased milk cow numbers and to higher yield per cow, total milk production for the quarter under review was up about 15 percent.

Although cow numbers in the Netherlands increased, milk production in the January-March quarter declined, due to the narrow feed position and the poor condition of pasture lands. The first quarter in Ireland was marked by extremely unfavorable weather, which caused livestock to lose condition. Furthermore, feedstuffs costs rose sharply and fodder on small farms was limited. In the United Kingdom, cold weather continued to hamper milk production, which in the first quarter of 1951 declined approximately 6 percent below the corresponding quarter a year ago. With liquid consumption being well maintained, the amount of milk for manufacturing declined about 38 percent.

Milk production in Canada was down throughout the quarter, due to lower milk cow numbers, the smaller number of cows milked, and to a slight decline in milk yields. In the United States, a drop of approximately 2 percent in milk production from last year is attributed to lower production per cow, resulting from poorer quality roughage in some regions and sharply retarded winter grazing crops in some others.

Butter production in factories continued to decline in most countries in the first quarter of 1951, although in a few countries, output was higher than a year ago. In the Southern Hemisphere, an increase of 16 percent occurred in New Zealand where mild conditions prevailed throughout most of the quarter. Output in Australia declined in this period, due to the dry, hot weather experienced in the larger producing States.

Several European countries again reported increases in butter production, the most notable gains being made in Switzerland and in Western Germany. In the former country, deliveries of milk to factories rose 12 percent above a year ago and the excess milk was turned mostly into butter. Larger deliveries to plants in Western Germany also resulted in increased butter output. In Denmark, production during the first quarter increased by about 2 percent. Output in Sweden was approximately the same as a year ago.

Production of butter in the Netherlands, 9 percent below that of the opening quarter of 1950, reflected the lower supplies of milk available for manufacturing purposes and especially for butter manufacturing. In the United Kingdom, also, butter production was severely reduced, the amount of milk for factory produced dairy products being considerably below that of the preceding year. Very cold and wet weather in Ireland restricted milk deliveries to creameries, and butter production for the quarter was about 34 percent lower than in the same period of 1950.

In Canada and the United States, decreased milk production and continued high fluid milk consumption substantially reduced the quantity of milk for butter production, output of which declined 18 percent in the former country and 19 percent in the latter.

Cheese production in the first quarter of 1951 declined generally, compared with a year ago. A slight gain in output was recorded in New Zealand, but in Australia, production was only 93 percent of comparable 1950. In Denmark, cheese production increased considerably in the period under review, due to the tendency to use more milk for cheese instead of butter. This practice was brought about by the difficulty in reaching an agreement with the United Kingdom regarding the butter price.

The larger cheese output in the Netherlands in the January-March quarter is attributed to the favorable market for this commodity. Production in Switzerland was down about 16 percent, reflecting the diversion of large quantities of milk to butter manufacture. In the United Kingdom, cheese continued to receive priority in allocation of the available supplies of manufacturing milk. Nevertheless, in the opening quarter of 1951, the quantity of milk diverted to cheese was 20 percent below a year ago, resulting in a comparable decrease in cheese production.

In Canada, where both cheese factories and concentrated milk plants competed for Canada's reduced milk supply, cheese production was down 8 percent for the quarter. Increased demands by fluid outlets in the United States were responsible in part for the decline in cheese output of the opening quarter.

Canned milk production for the first three months of 1951 increased in 3 of the 5 countries reporting. Output in the Netherlands continued to rise, encouraged by the strong export demand. Production in the United Kingdom was severely reduced, reflecting the lower milk production and the smaller supplies available for manufacturing. Output in Australia declined 5 percent. Total canned milk production in Canada in the first quarter of the current year increased by approximately 17 percent over the corresponding quarter of the preceding year. Most of this increase took place in the production of evaporated whole milk which is manufactured in much larger volume than any other type of canned milk. In the United States, canned milk output rose 5 percent above that of a year ago, largely accounted for by the heavier production of evaporated whole milk which took place during the quarter.

Dried milk production showed a marked decline in all major producing countries in the first quarter of 1951. With foreign demand for Netherlands cheese and canned milk continuing high, less milk was available for other manufactured dairy products, and output of dried milk was only 68 percent of the corresponding quarter of 1950. Production in the United Kingdom continued to decline, again reflecting the reduced supplies available for dairy produced products, other than cheese. Smaller allotments of manufacturing milk to dried milk production were also responsible for Canada's lower output in the first quarter. In the United States, a substantial increase occurred in the production of dried whole milk. However, this was offset by the decline in output of nonfat dry milk solids, and over-all dried milk production was approximately 28 percent under last year's level.

### Current Conditions Abroad.-

Sydney:-Because of the very dry conditions experienced in the main dairying areas of Australia in the first few months of 1951, dairy production has declined sharply in the current season. Milk rationing became necessary in the metropolitan areas of Sydney, Newcastle and Brisbane, and for the first time in decades, Australia is short of butter. However, during the latter half of May and the first part of June, good rains were received in most dairy districts of Australia, and the pasture outlook is much more satisfactory.

Wellington:- Although very dry conditions have been experienced in some major producing areas of New Zealand, prospects for production are generally good.

Buenos Aires:- As a result of favorable rains in Argentina in May, the winter grazing and forage outlook is better this year than last. The condition of dairy cattle is considered fair to good in the principal dairy zones.

Copenhagen:- Rainy and warm weather has improved grazing conditions in most places in Denmark, and prospects for the season are favorable.

Frankfurt:- In Germany, the extended cool weather, the late improvement of pasture land and the delayed beginning of the grazing period postponed this year's seasonal increase in milk production by some weeks. Milk production and deliveries are now improving more rapidly.

The Hague:- In the Netherlands, lower temperatures retarded pastures, and slowed up the usual seasonal increase in milk production.

London:- Spring weather in the United Kingdom was especially backward and pastures were late. Stock show the effects of the continued unfavorable weather, which also is affecting milk production.

Ottawa:- In Canada, the much-better-than-normal condition of pastures that existed this spring is expected to continue into the summer months. The feed supply is excellent.

Washington:- Milk production in the United States in 1951 probably will not be much below the 120.6 billion pounds produced in 1950, particularly if pastures improve from May 1 level and are average or better this season.

- By Regina M. Murray, based in part upon U. S. Foreign Service reports.

## DAIRY PRODUCTS: Factory output in principal producing and exporting countries, first quarter (calendar) 1951, with comparisons

| Country and product | Average 1934-38 | Total 1950 | 1950 | | | | 1951 | First quarter 1951/50 |
|---|---|---|---|---|---|---|---|---|
| | | | 1st quarter | 2nd quarter | 3rd quarter | 4th quarter | 1st quarter | |
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| Butter | | | | | | | | |
| Canada | 248,119 | 261,606 | 30,851 | 88,228 | 98,139 | 44,388 | 25,290 | 82 |
| United States | 1,673,328 1/ | 1,396,685 1/ | 322,610 1/ | 452,480 | 374,755 | 246,840 | 261,645 | 81 |
| Belgium | 46,179 2/ | 73,473 | 12,873 | 21,834 | 22,066 | 16,700 | - | - |
| Denmark | 400,660 1/ | 395,946 | 79,587 1/ | 116,622 | 111,774 1/ | 87,963 | 81,129 | 102 |
| France 3/4/ | 444,888 | - | - | - | - | - | - | - |
| Germany, Western 5/ | 560,000 1/ | 570,710 | 109,364 | 161,363 | 168,198 1/ | 131,785 | 116,204 | 106 |
| Ireland | 89,400 | 82,672 | 5,071 | 27,998 | 36,155 | 13,448 | 3,326 | 66 |
| Netherlands | 201,000 1/ | 205,497 | 35,150 | 71,092 | 61,105 1/ | 38,150 | 32,045 | 91 |
| Norway | 24,930 1/ | 25,472 | 4,757 | 9,721 1/ | 7,701 1/ | 3,293 | - | - |
| Sweden | 151,309 | 239,420 | 50,081 | 68,865 1/ | 70,324 1/ | 50,150 | 50,044 | 100 |
| Switzerland 3/ | 57,760 1/ | 41,501 1/ | 7,141 | 11,166 | 13,806 1/ | 9,388 | 9,034 | 126 |
| United Kingdom | 44,200 1/ | 36,601 | 7,840 | 19,085 | 7,392 1/ | 2,284 | 3,226 | 41 |
| Argentina | 65,742 6/ | 112,360 6/ | 22,579 6/ | 24,270 6/ | 21,860 6/ | 43,651 | - | - |
| Union of South Africa | 27,725 | 59,715 | 17,956 | 13,486 | 12,180 | 16,093 | - | - |
| Australia 7/ | 437,032 | 378,886 | 105,816 | 62,273 | 72,202 | 138,595 | 99,964 | 94 |
| New Zealand - total 8/ | 366,049 1/ | 372,361 1/ | 107,489 | 27,911 | 71,082 | 165,879 | 124,481 | 116 |
| Export gradings 9/ | 314,753 1/ | 309,682 | 97,099 1/ | 18,574 | 55,825 | 138,184 | 119,439 | 123 |
| Cheese | | | | | | | | |
| Canada | 114,699 | 96,306 | 5,181 | 34,111 | 41,772 | 15,242 | 4,787 | 92 |
| United States | 643,234 1/ | 1,170,465 1/ | 247,600 1/ | 386,550 | 321,325 | 214,990 | 230,885 | 93 |
| Denmark | 68,820 1/ | 129,630 | 26,896 | 35,715 | 37,258 1/ | 29,761 | 34,833 | 130 |
| France 3/4/ | 363,098 | - | - | - | - | - | - | - |
| Italy 10/ | 523,518 6/ | 575,000 | - | - | - | - | - | - |
| Netherlands | 200,000 | 235,510 | 32,403 | 77,356 | 80,263 | 45,488 | 36,458 | 112 |
| Norway | 39,067 1/ | 56,175 | 12,841 | 20,109 1/ | 14,243 1/ | 8,982 | - | - |
| Sweden | 71,269 | 113,537 | 28,346 | 35,600 | 28,614 1/ | 20,977 | 29,101 | 103 |
| Switzerland | 111,729 1/ | 114,106 1/ | 15,308 | 35,549 | 41,190 | 22,059 | 12,926 | 84 |
| United Kingdom 3/ | 109,000 1/ | 123,873 | 28,538 | 46,637 1/ | 35,930 1/ | 12,768 | 23,110 | 81 |
| Argentina | 67,873 6/ | 226,018 6/ | 53,488 6/ | 49,394 6/ | 47,518 6/ | 75,618 | - | - |
| Union of South Africa | 10,195 | 20,567 | 5,092 | 4,211 | 5,012 | 6,252 | - | - |
| Australia 7/ | 49,111 1/ | 103,687 | 23,753 | 12,227 | 21,937 1/ | 45,770 | 22,149 | 93 |
| New Zealand - total 8/ | 201,272 1/ | 239,594 1/ | 73,709 | 25,715 | 36,998 | 103,172 | 76,821 | 104 |
| Export gradings 9/ | 194,175 | 224,395 | 77,419 | 32,602 | 21,320 | 93,054 | 81,570 | 105 |

DAIRY PRODUCTS: Factory output in principal producing and exporting countries, first quarter (calendar) 1951, with comparisons

| Country and product | Average 1934-38 | Total 1950 | 1950 1st quarter | 1950 2nd quarter | 1950 3rd quarter | 1950 4th quarter | 1951 1st quarter | First quarter 1951/50 |
|---|---|---|---|---|---|---|---|---|
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| Canned milk | | | | | | | | |
| Canada 11/ | 92,377 | 288,174 | 37,760 | 98,701 | 102,079 | 49,634 | 44,059 | 117 |
| United States 11/ | 2,469,535 | 1/ 4,001,440 | 1/ 815,085 | 1/ 1,303,625 | 1/ 1,144,585 | 1/ 738,145 | 857,230 | 105 |
| Cuba | 4/ 32,564 | 49,728 | 7,644 | 9,408 | 20,286 | 12,390 | - | - |
| Denmark | 40,785 | - | - | - | - | - | - | - |
| France | 12/ 28,953 | - | - | - | - | - | - | - |
| Netherlands | 304,896 | 1/ 379,506 | 73,058 | 105,016 | 115,585 | 1/ 85,847 | 83,281 | 114 |
| Switzerland | 14,198 | - | - | - | - | - | - | - |
| United Kingdom | 378,560 | 1/ 289,766 | 68,992 | 172,390 | 33,510 | 1/ 14,874 | 33,130 | 48 |
| Australia | 7/ 41,894 | 143,926 | 37,077 | 22,377 | 29,163 | 55,309 | 35,279 | 95 |
| New Zealand | 4/ 11,273 | - | - | - | - | - | - | - |
| Dried milk 13/ | | | | | | | | |
| Canada | 23,488 | 1/ 68,210 | 1/ 10,873 | 23,879 | 21,685 | 11,773 | 7,858 | 72 |
| United States | 4/ 203,555 | 1/ 975,020 | 245,590 | 1/ 364,410 | 1/ 228,120 | 136,900 | 175,645 | 72 |
| Belgium | 5,500 | 9,397 | 1,398 | 3,954 | 2,971 | 1,074 | 1,764 | 126 |
| Denmark | 2,205 | - | - | - | - | - | - | - |
| France | 12/ 7,685 | - | - | - | - | - | - | - |
| Netherlands | 56,438 | 1/ 91,134 | 1/ 14,928 | 1/ 46,931 | 1/ 23,620 | 1/ 5,655 | 10,216 | 68 |
| Sweden | 1,351 | 18,960 | 4,244 | 4,976 | 1/ 6,418 | 1/ 3,322 | 5,690 | 134 |
| Switzerland | 2,381 | - | - | - | - | - | - | - |
| United Kingdom | 33,600 | 1/ 83,507 | 19,174 | 42,739 | 1/ 15,680 | 1/ 5,914 | 10,016 | 52 |
| Australia | 7/ 16,971 | 1/14/15/ 92,244 | 1/14/ 26,692 | 1/14/ 12,803 | 14/ 17,412 | 1/14/ 35,337 | 14/ 19,344 | 72 |
| New Zealand | 16/ 17,429 | - | - | - | - | - | - | - |

1/ Revised. 2/ Total production is estimated at 165,345,000 pounds in 1950. 3/ Total production. 4/ Less than a 5-year average. 5/ Average for years 1935-38. 6/ Estimated. 7/ Production year beginning July 1. 8/ Production year beginning April 1. 9/ Marketing year beginning August 1. 10/ Total cheese, and includes cheese made from the milk of sheep and goats. 11/ Both bulk and case goods. 12/ For 1937 only. 13/ Total dried-whole and dried-skim milk for human consumption. 14/ Includes infants' foods, health beverages, etc. 15/ Production of dried-whole and dried-skim milk was 62,631,000 pounds in 1950. 16/ For 1938 only.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service Reports, and other information.-June 25, 1951.

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# WORLD OUTPUT OF DAIRY PRODUCTS, FOURTH QUARTER, 1950, AND ANNUAL, 1950

## FOURTH QUARTER

Overall factory production of dairy products increased slightly in the fourth quarter of 1950 in many of the important producing countries compared with the corresponding quarter of 1949, according to information available to the Office of Foreign Agricultural Relations. In the Southern Hemisphere, seasonal conditions were generally favorable for increased milk production during the quarter. Abundant rainfall in Argentina improved pastures and indicated milk output was higher than a year earlier. In the Union of South Africa sufficient rain fell to carry pastures through the quarter in good condition, and raised the milk flow above normal levels. In both Australia and New Zealand a small increase in dairy cattle numbers and the favorable growing season resulted in higher milk production in the fourth quarter. This increase was utilized in a higher output of manufactured dairy products.

Conditions favorable to milk production were experienced in most Western European countries in the October-December quarter. Better feed supplies, larger milk cow numbers and higher yield per cow were contributing factors in the increased milk production, much of which was channeled into manufacturing because of existing price relationships.

Some drop in both milk cow numbers and in yield per cow in Canada resulted in a decline in milk production in the fourth quarter below the level of a year ago. Continued demand for milk for fluid consumption further reduced the quantity of milk available for manufacturing purposes. In the United States, milk production per cow was at a record level, but a slight downward shift in cow numbers held total milk production for the quarter just below that of the comparable quarter of 1949. This low output, together with somewhat higher fluid consumption, decreased the supplies available for processing into dairy products.

Butter production in factories in the fourth quarter of 1950 fell slightly below the level of the corresponding quarter of 1949 as increases in important butter producing countries abroad were not sufficient to offset the sharp drop in output in the United States and Canada. Output in New Zealand in the quarter was somewhat above the same quarter a year ago, reflecting the improved climatic conditions, and the higher milk production of this period. In Australia, the lowered production in the important dairying State of Victoria, due to dry, hot weather in December, offset the increased output of the other dairy States, and over-all butter production for the entire quarter fell just below comparable 1949. With favorable weather and feed conditions in the Union of South Africa throughout most of the quarter, butter production rose approximately 36 percent over a year ago, and set a record for this quarter.

Higher milk production in Denmark in this period resulted in more milk being available for manufacturing purposes, and output of butter was up approximately 5 percent over the fourth quarter a year earlier. In Western Germany, due to larger milk cow numbers and higher yield per cow, milk production increased substantially in the final quarter, and output of butter rose 13 percent. Swedish butter production continued at a high level in the October-December period of 1950, exceeding comparable 1949 production by 6 percent. In Switzerland, good weather and plentiful feed and grazing were contributing factors in the sharp increase in milk production in the fourth quarter and in turn were reflected in higher butter output for the same period. Larger deliveries to creameries in Belgium were mainly responsible for the gain of 36 percent in butter output which took place in the quarter under review.

Production in the Netherlands in the final quarter dropped slightly below 1949 for the first time this year, with more milk going into other manufactured products than into butter. In Ireland, milk production declined sharply in the fourth quarter due to adverse weather and to a shortage of feedstuffs. The resulting lower deliveries to creameries caused a curtailment of creamery butter production and led to imports from Denmark and New Zealand early in the new year. Cheese factories in the United Kingdom received the greatest portion of manufacturing milk, thus reducing the supplies to be converted to butter.

Lower milk production in Canada in the fourth quarter of 1950 and the continued trend toward increased fluid milk consumption decreased the quantity of milk available for manufacturing, and butter output in this period declined 15 percent from a year ago. A similar situation occurred in the United States where production of butter declined 16 percent from the fourth quarter 1949.

Cheese production in the final quarter of 1950 was somewhat higher than in the same quarter a year ago. In the Southern Hemisphere, the larger output in both Australia and New Zealand reflected the increase in milk production in those countries in this period. Conditions in the Union of South Africa were favorable for cheese production, output of which in the fourth quarter was a record high.

Because of the favorable market for cheese of Dutch manufacture, Netherlands production of that commodity continued to increase. In Denmark, much of the larger milk output of the quarter was utilized by cheese factories and production showed a substantial gain in this period. Exceptionally high milk deliveries to plants in Switzerland in the quarter under review resulted in an increase of 23 percent in cheese production in that quarter. In the United Kingdom, cheese factories continued to receive the largest portion of milk for manufacturing and cheese production was greater than for the same quarter of the previous year. Output of cheese in Sweden in the closing quarter of 1950,- 71 percent of comparable 1949,- was reduced because of the relatively large stocks on hand.

Canadian cheese production in the October-December quarter of 1950 dropped below comparable 1949 as a result of decreased milk production and also the changing pattern of utilization. Output in the United States in the final quarter dropped to 94 percent of that of 1949, largely due to the sharp reduction in cheddar cheese production which occurred in each month of the quarter.

Canned milk statistics are not collected quarterly by all producing countries but for the 6 countries reporting, total production rose 8 percent over the final quarterly period of 1950. In the Netherlands, the export demand for canned milk continued high, and production in the fourth quarter of 1950 rose 36 percent over a year ago. Cuban canned milk production in the period under review dropped to 89 percent of a year earlier, the direct result of abnormal rainfall which flooded roads in the vicinity of the leading condenseries and hampered deliveries. Output of total canned milk in Canada fell just below the 1949 level, although production of the more important evaporated milk was appreciably higher. The quantity of canned milk processed in the United States in the final three months of 1950 showed a gain of 12 percent over the earlier year, due to the heavier production of evaporated milk which is manufactured in much larger quantity than other types of canned milk. Fourth quarter output in both the United Kingdom and Australia, the only other countries reporting, was smaller than that of the same period of 1949.

Dried milk production in the fourth quarter, as reported by 7 countries, was only 75 percent of comparable 1949. Output in Sweden in this period dropped to 59 percent of last year, the decrease being due to reduced foreign demand. Production also declined in the Netherlands, the United Kingdom, and Australia. An increase of 32 percent occurred in Belgium, but Belgian output of dried milk is comparatively small and the increased production there could not offset the decline in heavier-producing countries. In Canada and the United States, lower output of nonfat dry milk solids in the final quarter resulted in a production of total dried milk considerably below that for the corresponding 3 months of 1949.

## ANNUAL

The year 1950 as a whole was favorable for the output of factory dairy products, over-all production of which showed a slight increase over a year ago. In almost all of the major producing countries, conditions for milk production were more favorable than in 1949. Better feeds, larger numbers of dairy cows, healthy condition of dairy animals, and in some countries a higher yield per cow, resulted in higher milk production. Much of the increase was diverted to manufacturing purposes.

Conditions in the Southern Hemisphere were generally good for milk production throughout most of the year. In Argentina, heavy rains after mid-1950 improved pastures, and raised the milk flow for the entire year well above the 1949 level. Exceptionally favorable weather, feed and pastures conditions in the Union of South Africa were responsible for a record year of dairy production. In Australia and New Zealand, a slight increase in dairy cow numbers and good producing conditions helped to maintain milk production somewhat above the 1949 level in the former country and only slightly below in the latter.

Throughout Western Europe, milk production in 1950 was appreciably higher than that of a year ago, reflecting the improvement in feed supplies, increased cow numbers and a higher rate of production.

Milk production in Canada in 1950 declined approximately 2 percent compared with the previous year. This lower output was attributed to a late spring and unseasonable summer weather which caused lower yields per cow and to a decline in dairy cattle numbers. In the United States, milk production showed a slight gain over 1949, the result of a substantial increase in yield per cow.

Butter production in factories in 1950 was somewhat above that of 1949. Output in the Union of South Africa, where conditions for dairy production were exceptionally favorable, reached a record high. In Argentina, a large portion of the increased milk production was utilized in the manufacture of butter, output of which in 1950 is estimated at approximately 4 percent higher than a year ago. In Australia, the quantity of butter produced was in excess of 1949 output, while in New Zealand, it dropped somewhat below the earlier year. Butter was derationed in both countries in June 1950.

Output of butter also increased in the countries of Western Europe. Favorable feed and grazing in Denmark throughout 1950 increased milk production. The bulk of the surplus was channeled into butter production and butter exports were 12 percent higher than a year earlier. Butter was derationed on November 7 after ten years of rationing. In both Western Germany and the Netherlands, milk production reached its highest postwar level in 1950, due to a larger number of milk cows and a higher rate of production per cow. With increased quantities going to creameries, factory butter output in both countries rose above that of a year ago.

Production of butter in Norway in 1950 increased 8 percent over 1949. Since the quantity produced exceeded what the home-market could absorb at prevailing prices, the excess was exported,-the greater part of it to Western Germany. In Sweden, where good pastures and ample feed supplies were reflected in higher milk production, output of butter rose approximately 11 percent above the 1949 level. Appreciable gains in butter production also were reported in Belgium and Switzerland. In Ireland, milk production was maintained at a high level until the final quarter of the year, when adverse weather and fodder shortage seriously affected milk yields. While butter production declined in this period, output for the year as a whole was above 1949 production. Milk production in the United Kingdom was at a record level in 1950, made possible by the greater number of cows and by increased yield per cow. The bulk of this increase was used in manufacturing, much of it going into butter production.

A sharp drop in output took place in the principal butter-producing countries of the Western Hemisphere. In Canada, even though milk production declined below last year's level, fluid consumption increased. With lower supplies available for manufacturing, butter production declined. Another factor in this smaller output was the competition from margarine. In the United States also, the quantity of milk for dairy products production was somewhat below 1949, and butter production showed a small decline compared with the earlier year.

Cheese production in the major producing countries of the world increased slightly in 1950 over 1949. In Australia, production was a record high. The greatest rise occurred in the most important dairying State of Victoria, where additional manufacturing units for cheese have been installed in recent years. The output of cheese in New Zealand in 1950 also showed an appreciable gain over 1949. Other countries of the Southern Hemisphere reporting a higher cheese production were Argentina and the Union of South Africa.

Increased cheese production was reported in several countries of Western Europe in the year just closed. In the Netherlands, cheese production was very remunerative in 1950. The market for Edam was particularly good, and output of this type increased substantially over 1949. Production in Norway was well ahead of the earlier year. However, supplies were not sufficient to meet demands, partly because of increased consumption, and cheese is still rationed. Larger milk deliveries to Swiss factories in 1950 resulted in higher cheese output.

Cheese production in Sweden declined sharply below that of a year ago, due to the availability of relatively large stocks at the beginning of the year. In the United Kingdom, cheese plants received a large portion of the manufacturing milk and cheese production reached a record of 123 million pounds, which was considerably above prewar.

In this Hemisphere, represented by Canada and the United States, the output of cheese in 1950 dropped below the 1949 level. In the former country, where milk production was lower then in the earlier year, 42 percent of the milk produced was used as fluid, compared with 39 percent in 1949. The quantity of milk available for cheese production was correspondingly reduced. A decrease in cheese output in the United States reflected the smaller quantity of milk available for manufacturing during 1950.

Canned milk production in the six countries reporting was marked by an appreciable increase in 1950. Output in Australia ran well ahead of a year ago. In the Netherlands, production was at a record high, largely due to the strong export demand. The availability of larger milk supplies for use in manufacturing in the United Kingdom was the principal factor in the increase in output of canned milk which occurred there in 1950. Cuban milk production in 1950 increased slightly over 1949 and canned milk production reached an all-time high.

In Canada, canned milk was the only manufactured dairy product registering an increase in 1950. Production in the United States, particularly that of evaporated milk, was higher in 1950 than in 1949.

Over-all production of dried milk in 1950 was marked by a decline below that of the previous year, although increases occurred in some countries. Among these were the Netherlands, the United Kingdom and Belgium. Swedish dried milk production dropped below 1949 output, due to the waning export demand. In Canada, total dried milk production was under that of a year earlier. A much lower output of nonfat dry milk accounted for this decline. Decreased nonfat dry milk production was also responsible for the drop in output of total dried milk which took place in the United States in 1950.

Current Conditions Abroad:

Sydney:-Seasonal conditions in all the main dairying areas of Australia (as of the first of March) are generally promising, dairy herds are in excellent health, and the outlook for the maintenance of output of dairy products at the high level of 1950 is generally good.

Wellington:-January and February conditions in New Zealand were favorable for dairying. With heavy rains in late February over the greater part of the Dominion and continued warm temperatures, prospects for autumn production are excellent. There should also be good reserves of feed available for the winter months.

Pretoria:-Pastures in most parts of the Union of South Africa are generally favorable for a continuance of the record dairy production obtained in 1950.

Buenos Aires:-Present conditions are reported excellent in the principal dairy zones of Argentina. Prospects for grazing are good. Prices are sufficiently high to encourage a moderate expansion of the dairy industry. Scarcities of cheese may occur in view of the trend to divert from cheese manufacture to casein.

Frankfurt:-The roughage situation in Western Germany continued to be good in the first quarter of this year, and is expected to remain so into the new season.

Oslo:-Although less concentrate feed will be available and only at considerably higher prices, it is assumed that Norwegian milk production will again increase in 1951, but at a lower rate than in previous years.

The Hague:-Total milk production in the Netherlands is expected to decrease in 1951, mainly as the result of smaller feed allocations. Cheese markets are expected to be even better than in 1950, particularly if Belgium and Western Germany are able to purchase this commodity to the same extent as in 1950. The production of condensed and dried milk may be affected by the shortage of tinplate.

London:-The Ministry of Food anticipates a 2 percent rise in milk production in the United Kingdom in 1951, most of which will go into manufacturing.

Dublin:-Milk production in Ireland, at least during the next few months until pastures are flourishing, may be below 1950. Cattle will have lost condition in the long winter. Stocks of fodder are extremely low. Deliveries to creameries showed substantial decreases in January and February.

Havana:-Cuban supplies of fresh milk are seasonally tight throughout most of Cuba with the exception of the Havana area. It is expected that this situation will ease about the middle of May when spring rains will begin to restore pastures.

Ottawa:-Reports indicate a decline in milk production in Canada in the first two months of the current year, compared with a year ago, due to somewhat smaller milk cow numbers and to lower yields. This decrease, together with the continuing high rate of fluid consumption, was reflected in smaller quantities used for the manufacture of factory dairy products during these two months.

Washington:-First quarter 1951 milk production in the United States is at a slightly lower level than for 1950 and more milk is going into fluid use. Consequently less milk is available for manufactured products. Butter, cheese and nonfat-solids production for the quarter are at a lower level than for last year and evaporated, condensed and dry whole milk production are up somewhat. This trend is expected to continue throughout most of 1951 as butter prices and, to a lesser extent, milk prices remain unfavorable relative to feed and meat prices.

---By L. M. Smith, Jr. and Regina M. Murray, based in part upon U.S. Foreign Service reports.

DAIRY PRODUCTS: Factory output in principal producing and exporting countries, 4th quarter (calendar) 1950, with comparisons

| Country and product | Average 1934-38 | Total 1949 | Total 1950 | 1949 4th quarter | 1950 1st quarter | 1950 2nd quarter | 1950 3rd quarter | 1950 4th quarter | 4th quarter 1950/1949 |
|---|---|---|---|---|---|---|---|---|---|
| | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | 1,000 lbs. | Percent |
| Butter | | | | | | | | | |
| Canada | 248,119 | 1/ 279,805 | 261,606 | 1/ 52,466 | 1/ 30,851 | 1/ 88,228 | 1/ 98,139 | 44,388 | 85 |
| United States | 1,673,328 | 1,412,101 | 1,394,505 | 292,518 | 321,565 | 451,345 | 374,755 | 246,840 | 84 |
| Belgium | 46,179 | 2/ 57,170 | 2/ 73,473 | 12,687 | 1/ 12,873 | 21,834 | 22,066 | 16,700 | 132 |
| Denmark | 400,660 | 1/ 343,697 | 394,623 | 82,452 | 79,587 | 1/ 116,623 | 111,774 | 86,639 | 105 |
| France | 3/4/ 444,888 | 233,915 | - | 55,494 | - | - | - | - | - |
| Germany, Western | - | 1/ 522,326 | 571,146 | 1/ 117,368 | 109,364 | 161,363 | 168,198 | 132,221 | 113 |
| Ireland | 89,400 | 1/ 76,720 | 82,672 | 16,099 | 1/ 5,071 | 1/ 27,998 | 36,155 | 13,448 | 84 |
| Netherlands | 201,000 | 184,878 | 205,469 | 39,143 | 35,150 | 71,092 | 1/ 61,105 | 38,122 | 97 |
| Norway | 24,930 | 23,660 | 5/ 25,678 | 3,157 | 4,757 | 9,721 | 7,702 | 5/ 3,498 | 5/ 111 |
| Sweden | 151,309 | 1/ 216,271 | 239,420 | 48,730 | 50,081 | 68,865 | 1/ 69,107 | 51,367 | 105 |
| Switzerland 3/ | 57,760 | 35,007 | 40,810 | 8,731 | 6,866 | 11,166 | 13,806 | 8,972 | 103 |
| United Kingdom | 44,200 | 1/ 23,520 | 36,333 | 2,688 | 7,840 | 19,085 | 7,392 | 2,016 | 75 |
| Argentina | 65,742 | 5/ 86,000 | 5/ 112,139 | - | 5/ 22,557 | 5/ 24,270 | 5/ 21,861 | 5/ 43,651 | - |
| Union of South Africa | 27,725 | 46,466 | 59,715 | 11,843 | 17,956 | 13,486 | 12,180 | 16,093 | 136 |
| Australia | 6/ 437,032 | 378,011 | 378,886 | 138,728 | 105,816 | 62,273 | 1/ 72,202 | 138,595 | 99 |
| New Zealand - total | 7/ 366,049 | 1/ 393,973 | 372,190 | 1/ 163,916 | 107,318 | 27,911 | 71,082 | 165,879 | 101 |
| Export gradings | 8/ 314,753 | 350,523 | 309,683 | 149,887 | 97,099 | 18,575 | 55,825 | 138,184 | 92 |
| Cheese | | | | | | | | | |
| Canada | 114,699 | 1/ 116,915 | 96,306 | 1/ 21,616 | 1/ 5,181 | 1/ 34,111 | 1/ 41,772 | 15,242 | 70 |
| United States | 643,234 | 1/ 1,200,011 | 1,171,825 | 1/ 229,273 | 248,250 | 387,260 | 321,325 | 214,990 | 94 |
| Denmark | 68,820 | 1/ 140,653 | 130,071 | 1/ 26,236 | 26,896 | 35,715 | 37,258 | 30,202 | 115 |
| France | 3/4/ 363,098 | 399,039 | - | 88,927 | - | - | - | - | - |
| Italy 9/ | 523,518 | 5/ 485,000 | 5/ 525,000 | - | - | - | - | - | - |
| Netherlands 3/ | 266,549 | 1/ 281,968 | 286,378 | 53,239 | 32,403 | 77,356 | 80,263 | 96,356 | 181 |
| Norway | 39,067 | 46,100 | 5/ 57,325 | 8,016 | 12,841 | 20,109 | 14,685 | 5/ 9,690 | 5/ 121 |
| Sweden | 71,269 | 1/ 144,401 | 113,537 | 1/ 29,321 | 28,346 | 35,600 | 1/ 28,647 | 20,944 | 71 |
| Switzerland | 111,729 | 1/ 109,886 | 114,080 | 17,894 | 15,282 | 35,549 | 41,190 | 22,059 | 123 |
| United Kingdom 3/ | 109,000 | 1/ 73,920 | 122,932 | 9,453 | 28,538 | 46,637 | 1/ 35,437 | 12,320 | 130 |
| Argentina | 67,873 | 5/ 218,000 | 5/ 226,018 | - | 5/ 53,488 | 5/ 49,394 | 5/ 47,518 | 5/ 75,618 | - |
| Union of South Africa | 10,195 | 17,096 | 20,567 | 4,044 | 1/ 5,092 | 1/ 4,211 | 5,012 | 6,252 | 155 |
| Australia | 6/ 49,111 | 101,023 | 103,690 | 42,605 | 23,753 | 12,227 | 1/ 21,937 | 45,773 | 107 |
| New Zealand - total | 7/ 201,272 | 1/ 233,779 | 239,446 | 1/ 102,033 | 73,561 | 25,715 | 36,998 | 103,172 | 101 |
| Export gradings | 8/ 194,175 | 220,286 | 224,395 | 94,535 | 77,419 | 1/ 32,602 | 21,320 | 93,054 | 98 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Canned milk | | | | | | | | | |
| Canada 10/ | 92,377 | 1/ 269,482 | 288,174 | 1/ 50,076 | 1/ 37,760 | 1/ 98,701 | 1/ 102,079 | 49,634 | 99 |
| United States 10/ | 2,469,535 | 1/ 3,860,893 | 4,002,565 | 1/ 657,887 | 1/ 815,985 | 1/ 1.303.285 | 1/ 1.145.500 | 737.795 | 112 |
| Cuba | 4/ 32,564 | 44,982 | 49,728 | 13,860 | 7,644 | 1/ 9,408 | 20,286 | 12,390 | 111 |
| Denmark | 40,785 | 81,835 | - | 25,336 | - | - | - | | |
| France | 11/ 28,953 | - | - | - | - | - | - | - | - |
| Netherlands | 304,896 | 260,894 | 379,412 | 62,884 | 73,058 | 105,016 | 1/ 115,585 | 85,753 | 136 |
| Switzerland | 14,198 | - | - | - | - | - | - | - | - |
| United Kingdom | 378,560 | 1/ 240,800 | 285,286 | 40,051 | 68,992 | 172,390 | 1/ 33,510 | 10,394 | 26 |
| Australia | 6/ 41,894 | 134,234 | 143,926 | 56,751 | 37,077 | 22,377 | 29,163 | 55,309 | 97 |
| New Zealand | 4/ 11,273 | - | - | - | - | - | - | - | |
| Dried milk 12/ | | | | | | | | | |
| Canada | 23,488 | 1/ 75,069 | 68,068 | 1/ 13,807 | 1/ 10,731 | 1/ 23,879 | 1/ 21,685 | 11,773 | 85 |
| United States | 4/ 203,555 | 1,059,203 | 973,635 | 191,374 | 1/ 245,590 | 1/ 363,460 | 1/ 227,685 | 136,900 | 72 |
| Belgium | 5,500 | 8,059 | 9,397 | 815 | 1/ 1,398 | 3,954 | 2,971 | 1,074 | 132 |
| Denmark | 2,205 | 20,340 | - | 9,683 | - | - | - | - | - |
| France | 11/ 7,685 | - | - | - | - | - | - | - | - |
| Netherlands | 56,438 | 62,472 | 91,050 | 7,154 | 14,926 | 46,930 | 1/ 23,619 | 5,575 | 78 |
| Sweden | 1,351 | 1/ 33,074 | 18,960 | 1/ 5,952 | 4,244 | 4,976 | 1/ 6,213 | 3,527 | 59 |
| Switzerland | 2,381 | - | - | - | - | - | - | - | - |
| United Kingdom | 33,600 | 1/ 65,856 | 83,059 | 7,975 | 19,174 | 42,739 | 1/ 15,859 | 5,287 | 66 |
| Australia | 6/ 16,971 | 1/13/14/98,699 | 13/14/92,136 | 1/13/38,946 | 13/ 26,739 | 13/ 12,706 | 13/ 17,412 | 13/35,279 | 91 |
| New Zealand | 15/ 17,429 | - | - | - | - | - | - | - | - |

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1/ Revised. 2/ Total production is estimated at 143,299,000 pounds in 1949, and 154,322,000 pounds in 1950. 3/ Total production. 4/ Less than a 5-year average. 5/ Estimated. 6/ Production year beginning July 1. 7/ Production year beginning April 1. 8/ Marketing year beginning August 1. 9/ Total cheese, and includes cheese made from the milk of sheep and goats. 10/ Both bulk and case goods. 11/ For 1937 only. 12/ Total dried-whole and dried-skim milk for human consumption. 13/ Includes infants' foods, health beverages, etc. 14/ Production of dried-whole and dried-skim milk was 67,109,000 pounds in 1949, and 62,679,000 pounds in 1950. 15/ For 1938 only.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service Reports and other information.-March 26, 1951.

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